Program Outlines

For detailed information on career and technical program offerings at SCC, SFCC and the IEL, go online to: http://icatalog.ccs.spokane.edu/program/default.aspx.

ACCOUNTING ASSISTANT/ACCOUNTING CLERK
AAS, Certificate: SCC

As a paraprofessional in the accounting field, the accounting assistant analyzes and interprets the essential information about the operations of a business and contributes vitally to important policies and decisions.

An accounting assistant should have above–average aptitude for working with numbers and the ability to concentrate and communicate. Accounting affords a continuing challenge to creative, alert minds.

Students will receive an Accounting Clerk Certificate after completing the first three quarters of the AAS degree. All students graduating from this program must have a minimum grade of 2.0 in each of the accounting, economics and general business required courses. Students must also have a 2.0 cumulative minimum grade point average in all required courses in this program.

This degree is non–transferable to a four–year university. Students working toward the associate of arts degree for transfer to a four–year institution should consult individually with an adviser or counselor for planning the AA degree program. For information on AA degree requirements, refer to the Degree and Certificate Requirements section of the CCS catalog. More information on specific transfer programs can be found in the Academic Programs section of the CCS catalog.

AAS
Accounting Assistant
First Quarter

ACCT	151	College Accounting I [1]	5
BUS&	101	Intro to Business	5
CATT	120	Microsoft Word I	2.5
CATT	138	Microsoft Excel I	2.5
		Total	**15**

Second Quarter

ACCT	141	QuickBooks	5
ACCT	152	College Accounting II [1]	5
BUS	104	Business Mathematics [2]	5
		Total	**15**

Third Quarter

ACCT	161	Payroll Procedures	4
ACCT	162	Business Tax Accounting	1
BT	109	Business Communications	5
CATT	139	Microsoft Excel II [3]	2.5
		Business Electives [3]	3
		Total	**15.5**

Fourth Quarter

ACCT	142	Advanced QuickBooks	5
ACCT	212	Accounting Applications and Analysis [4]	5
CMST	287	Business and Professional Communication	5
		Total	**15**

Fifth Quarter

ACCT	204	Accounting Integration	5
BUS	280	Human Relations in Business	5
		Business Electives [3]	5
		Total	**15**

Sixth Quarter

ACCT	288	Cooperative Education Work Experience (No Seminar)	2
BT	160	Job Preparation Techniques	3
BUS&	201	Business Law	5
ECON	100	Fundamentals of Economics	5
		Total	**15**

90.5 credits are required for the AAS

Business Electives

BUS	100	Money Management	3
BUS	217	Business Statistics [5]	5
CATT	238	Advanced Microsoft Excel I	2.5
CATT	239	Advanced Microsoft Excel II	2.5
CATT	241	Microsoft Project [6]	2.5
ECON&	201	Micro Economics	5
ECON&	202	Macro Economics	5
MMGT	101	Principles of Management [7]	5
MMGT	181	Leadership Training-DEC	1-5
MMGT	205	Small Business Planning	5
MMGT	223	Customer Service	3
MMGT	243	Fundamentals of Project Management	5

[1] These courses may be substituted with ACCT& 201 and 202.
[2] BUS 103 prerequisite or a proficiency test is required.
[3] Select courses from the list of approved business electives. Please see accounting department for additional options and additional accounting co–op credits.
[4] This course may be substituted with ACCT& 203.
[5] MATH 099 prerequisite with a 2.0 or better or appropriate placement scores.
[6] CIS 110 prerequisite or equivalent experience is recommended.
[7] BUS& 101 prerequisite or permission of instructor.

Certificate
Accounting Clerk
First Quarter

ACCT	151	College Accounting I [1]	5
BUS&	101	Intro to Business	5
CATT	120	Microsoft Word I	2.5
CATT	138	Microsoft Excel I	2.5
		Total	**15**

Second Quarter

ACCT	141	QuickBooks	5
ACCT	152	College Accounting II [1]	5
BUS	104	Business Mathematics [2]	5
		Total	**15**

Third Quarter

ACCT	161	Payroll Procedures	4
ACCT	162	Business Tax Accounting	1
BT	109	Business Communications	5
BT	160	Job Preparation Techniques	3
CATT	139	Microsoft Excel II	2.5
		Total	**15.5**

45.5 credits are required for the Certificate

[1] These courses may be substituted with ACCT& 201 and 202.
[2] BUS 103 prerequisite or a proficiency test is required.

ACCOUNTING PRE-MAJOR
AA–DTA, Associate in Business DTA/MRP: SCC/SFCC

The accountant analyzes and interprets the essential information about the operations of a business and contributes to important policies and decisions. Accountants are also asked to interpret tax laws and analyze how these laws may influence a business' future decisions.

An accountant should have above–average aptitude for working with numbers and the ability to concentrate and communicate. Accounting affords a continuing challenge to creative alert minds.

AA–DTA

		Suggested Courses to Consider [1]	90
		Total	**90**

90 credits are required for the AA–DTA

Associate in Business DTA/MRP

		Suggested Courses to Consider [1]	90
		Total	**90**

90 credits are required for the Associate in Business DTA/MRP

[1] Consult a counselor or academic adviser for recommended courses specific to student's choice of transfer institution.

ADDICTION STUDIES
AAS, Certificate: SFCC

SFCC's Addiction Studies program provides two options for obtaining the educational requirements to become a Chemical Dependency Professional (CDP). Washington State requires an associate's degree in human services or related field; **or** successful completion of 90 quarter college credits. At least 45 quarter credits must be in courses relating to the chemical dependency profession and shall include specific competencies defined by the State. SFCC offers the approved educational programs:

1. AAS Degree: A two–year educational training program for people who do not have at least 45 prior college credits.
2. Certificate Program: A one–year program for students who already have a minimum of 45 college–level credits, and need specific chemical dependency courses.

AAS

First Quarter

AS	131	Survey of Addictions	5
AS	176	Addiction Counseling Techniques	5
AS	182	Cultural Diversity; Risk Intervention for Health/HIV	5
		Total	**15**

Second Quarter

AS	277	Group Facilitation for Addiction Treatment	5
CAPPS	100	Beginning Computer Skills	2
ENGL&	101	English Composition I	5
IS	120	Business Computer Use	3
		Total	**15**

Third Quarter

AS	275	Physiological Actions of Alcohol and Drugs	5
BUS	123	Practical Business Math Applications [2]	5
PSYC&	100	General Psychology	5
		Total	**15**

Fourth Quarter

AS	141	Law, Ethics, and Professional Development for Addiction Counseling	5
AS	221	Treatment Theories for Addictions	5
AS	279	Case Management I: Screening, Diagnosis, Assessment, and ASAM	5
		Total	**15**

Fifth Quarter

AS	172	Family Systems and Adolescent Treatment in Addictions	5
AS	280	Case Management 2: Treatment Planning and Continuing Care	5
AS	281	Practicum I [1]	5
		Total	**15**

Sixth Quarter

AS	282	Practicum II [1]	5
AS	290	Co-Occurring Behavioral Health Disorders	5
PSYC&	200	Lifespan Psychology	5
		Total	**15**

90 credits are required for the AAS

[1] Practicum hours must be performed at an approved chemical dependency field site.
[2] MATH& 107 may be substituted for BUS 123.

Certificate

The one year certificate program offers a certificate from our college, which is not a substitute for state certification. The one year curriculum assumes that students have completed other college work. The state of Washington has a minimum requirement of 90 credit hours of education of which this certificate is only a part. You will need to demonstrate to the Department of Health that, in addition to the certificate courses listed here, you have a MINIMUM total of 90 approved credit hours, half of which are the certificate courses.

Prerequisites:

– AS	131	Survey of Addictions
– BUS	122	Practical Business Math
– ENGL&	101	English Composition I
– PSYC&	100	General Psychology

AS	141	Law, Ethics, and Professional Development for Addiction Counseling	5
AS	172	Family Systems and Adolescent Treatment in Addictions	5
AS	176	Addiction Counseling Techniques	5
AS	182	Cultural Diversity; Risk Intervention for Health/HIV	5
AS	221	Treatment Theories for Addictions	5
AS	275	Physiological Actions of Alcohol and Drugs	5
AS	277	Group Facilitation for Addiction Treatment	5
AS	279	Case Management I: Screening, Diagnosis, Assessment, and ASAM	5
AS	280	Case Management 2: Treatment Planning and Continuing Care	5
AS	281	Practicum I [1]	5
AS	282	Practicum II [1]	5
AS	290	Co-Occurring Behavioral Health Disorders	5
PSYC&	200	Lifespan Psychology	5
		Total	**65**

65 credits are required for the Certificate

[1] Practicum hours must be performed at an approved chemical dependency field site.

ADMINISTRATIVE ASSISTANT
AAS: SCC

The Administrative Assistant program combines a well–balanced academic program with expert office technology instruction giving students the diversified training and background needed to hold positions of responsibility and importance in many areas of the business world. This program helps raise the office skills of students to a professional level, gives students a technical background through completion of technical skill courses and an academic background, provides students a mature understanding of professional responsibilities and provides for minimum additional on–the–job training.

In order to earn an Administrative Assistant AAS degree, a student must maintain a 2.0 GPA in all individual courses.

AAS

First Quarter

BT	102	Document Processing	5
BT	105	Basic Grammar for Business II	5
BT	151	Business Student Preparation	5
		Total	**15**

Second Quarter

BT	109	Business Communications	5
BT	165	Word Processing	5
BUS	103	Basic Business Math and Electronic Calculators [1]	5
CATT	102	Introduction to Outlook	2.5
		Total	**17.5**

Third Quarter

BT	160	Job Preparation Techniques	3
BT	231	Office Procedures	5
BT	235	Machine Transcription	5
MMGT	223	Customer Service	3
		Total **16**	

Fourth Quarter

ACCT	151	College Accounting I [2]	5
BT	201	Information Processing	5
BT	272	Business Correspondence	5
		Total	**15**

Fifth Quarter

BT	202	Advanced Information Processing	5
BT	250	Information Technology	5
BT	260	Administrative Office Management	5
		Approved Electives [3]	5
		Total	**20**

Sixth Quarter

BT	263	Integrated Office Applications	5
BT	280	Project Management for the Office	2.5
BT	285	Administrative Professional Internship	2
CATT	128	Desktop Publishing	5
CATT	241	Microsoft Project	2.5
		Total	**17**

100.5 credits are required for the AAS

Approved Electives

ACCT	141	QuickBooks	5
BUS&	201	Business Law	5
BUS	204	Introduction to Law	5
BUS	280	Human Relations in Business	5
CMST&	210	Interpersonal Communication	5

[1] BUS 103 may be substituted with BT 128.
[2] ACCT 151 may be substituted with ACCT& 201.
[3] Select course from the list of approved electives.

ADMINISTRATIVE ASSISTANT
AAS: SFCC

At the core of almost every business are administrative support personnel. Students will gain proficiency in computer and Windows applications, learn the latest electronic communication tools, acquire speed and accuracy on the keyboard, and learn office procedures essential in today's business environment.

Students completing this degree will be competent in the following areas: taking notes at meetings and preparing minutes, oral and written communications, document formatting, basic accounting procedures, machine transcription, records management, office procedures, desktop publishing and spreadsheeting. Students will complete capstone courses which will integrate classroom learning into "real–world" office situations.

Students will have the opportunity to bridge the gap between the classroom and the working world by participating in a work experience internship as well as model office simulations. Students may begin in entry–level positions as front office professionals and work their way up to higher paying administrative secretaries, administrative assistants, or office managers.

AAS

First Quarter

BT	101	Keyboarding [1]	5
BT	107	Business Communications [2]	3
BUS	122	Practical Business Math [3]	3
GENST	114	Thriving In College	2
IS	160	Internet Fundamentals	1
		Total	**14**

Second Quarter

ACCT	103	Fundamental Bookkeeping Procedures [4]	3
BT	102	Document Processing	5
BT	108	Business Communications [2]	3
CAPPS	161	Access I	2
		Approved Electives	2
		Total	**15**

Third Quarter

BT	103	Formatting	5
BT	155	Records Information Management	3
BT	231	Office Procedures	5
BT	272	Business Correspondence	5
		Total	**18**

Fourth Quarter

BT	232	Office Procedures II	5
BT	235	Machine Transcription	5
BT	258	Desktop Publishing	5
CAPPS	151	Excel I	2
CAPPS	180	Outlook	2
		Total	**19**

Fifth Quarter

BT	255	Business Productivity Tools	3
BT	260	Administrative Office Management	5
BUS	280	Human Relations in Business [5]	5
		Approved Electives	3
		Total	**16**

Sixth Quarter

BT	160	Job Preparation Techniques	3
BT	201	Information Processing	5
BT	234	Administrative Professional Practicum	5
BT	285	Administrative Professional Internship	2
		Total	**15**

97 credits are required for the AAS

Approved Electives

ACCT	141	QuickBooks	1-5
ACCT&	202	Prin of Accounting II	5
BT	172	Publisher	2
BT	196	Skillbuilding	1
BUS&	101	Intro to Business	5
BUS	105	Principles of Leadership	3
BUS&	201	Business Law	5
BUS	217	Business Statistics	5
CAPPS	102	Introduction to Office	1
CAPPS	104	Beginning Windows Operating System	1
CAPPS	141	Word I	2
CAPPS	142	Word II	2
CAPPS	152	Excel II	2
CAPPS	162	Access II	2
CAPPS	171	PowerPoint I	2
CAPPS	172	PowerPoint II	2
CAPPS	241	Word III	2
CAPPS	242	Word IV	2
CAPPS	251	Excel III	2
CAPPS	252	Excel IV	2
CAPPS	261	Access III	2
CAPPS	262	Access IV	2
CAPPS	271	PowerPoint III	2
IS	103	Information Technology Fundamentals	5
IS	144	Programming Fundamentals	3
IS	162	Data Communications and Networks	3
IS	210	Internet Programming I	1-5
MMGT	101	Principles of Management	5
MMGT	125	Social Media Marketing	5
MMGT	205	Small Business Planning	5
MMGT	211	Marketing	5
MMGT	223	Customer Service	3
MMGT	231	Human Resource Management	5

[1] Students may take BT 102 if they possess keyboarding skills at 35 wpm and knowledge of business document formatting. Permission of instructor recommended.
[2] BT 107 and 108 may be substituted with ENGL& 101. If ENGL& 101 is substituted, an additional credit is required for the degree for a total of 97 credits.
[3] BUS 122 may be substituted with BUS 123, or MATH& 107. If taking BUS 123 or MATH& 107, program credits increase by 2 credits.
[4] ACCT 103 may be substituted with ACCT& 201.
[5] BUS 280 may be substituted with CMST& 210.

ADMINISTRATIVE/COMPUTER SPECIALIST
AAS: SFCC

This curriculum is designed to prepare students for careers as management information specialists, salesperson for vendors or retailers of microcomputer hardware and software, or technical support specialists. The beginning classes provide students with basic computer processing concepts and skills, along with necessary related accounting, management and communication skills. The advanced classes develop skills in microcomputer applications for business systems, operating systems and local area networks. Topics include programming, system software concepts, using applications packages, data base concepts, telecommunications and support of end users.

AAS

First Quarter

BT	101	Keyboarding [1]	5
BT	107	Business Communications [2]	3
BUS	122	Practical Business Math [3]	3
CAPPS	104	Beginning Windows Operating System	1
IS	120	Business Computer Use	3
		Total	**15**

Second Quarter

BT	108	Business Communications [2]	3
CAPPS	141	Word I	2
CAPPS	151	Excel I	2
IS	103	Information Technology Fundamentals	5
IS	144	Programming Fundamentals	3
IS	160	Internet Fundamentals	1
		Total	**16**

Third Quarter

BT	172	Publisher	2
BT	272	Business Correspondence	5
BUS	280	Human Relations in Business [4]	5
CAPPS	152	Excel II	2
CAPPS	171	PowerPoint I	2
		Total	**16**

Fourth Quarter

ACCT&	201	Prin of Accounting I	5
BT	258	Desktop Publishing	5
CAPPS	161	Access I	2
IS	162	Data Communications and Networks	3
		Total	**15**

Fifth Quarter

BT	255	Business Productivity Tools	3
BT	260	Administrative Office Management	5
CAPPS	162	Access II	2
CAPPS	180	Outlook	2
IS	262	Network Management	5
		Total	**17**

Sixth Quarter

BT	160	Job Preparation Techniques	3
BT	201	Information Processing	5
BT	285	Administrative Professional Internship	2
IS	210	Internet Programming I	3
		CAPPS Electives	4
		Total	**17**

96 credits are required for the AAS

CAPPS Electives

CAPPS	142	Word II	2
CAPPS	172	PowerPoint II	2
CAPPS	241	Word III	2
CAPPS	242	Word IV	2
CAPPS	251	Excel III	2
CAPPS	252	Excel IV	2
CAPPS	261	Access III	2
CAPPS	262	Access IV	2
CAPPS	271	PowerPoint III	2

[1] Students may take BT 102 if they possess keyboarding skills at 35 wpm and knowledge of business document formatting. Permission of instructor recommended.
[2] BT 107 and 108 may be substituted with ENGL& 101. If ENGL& 101 is substituted, an additional credit is required for AAS degree.
[3] BUS 122 may be substituted with BUS 123.
[4] BUS 280 may be substituted with CMST& 210.

ADMINISTRATIVE OFFICE MANAGEMENT
AAS: SCC

The Administrative Office Management program prepares students to manage functions in the office environment. This program is recommended to experienced office staff as well as entry–level office workers who are looking to increase their potential for promotion. Graduates will have expert office skills and in–depth software knowledge. The program provides training in office information systems, work process and

organizational performance improvement, human relations, business communications, business decision making, project management, and human resource management.

In order to earn an Administrative Office Management AAS degree, a student must maintain a 2.0 GPA in all individual courses.

AAS

First Quarter

BT	102	Document Processing	5
BT	109	Business Communications	5
BUS	103	Basic Business Math and Electronic Calculators [1]	5
CATT	102	Introduction to Outlook	2.5
		Total	**17.5**

Second Quarter

BT	165	Word Processing	5
BT	231	Office Procedures	5
CMST&	210	Interpersonal Communication	5
		Total	**15**

Third Quarter

ACCT&	201	Prin of Accounting I [2]	5
BT	201	Information Processing	5
BUS	280	Human Relations in Business	5
		Total	**15**

Fourth Quarter

BT	202	Advanced Information Processing	5
BT	272	Business Correspondence	5
BUS	204	Introduction to Law [3]	5
MATH	201	Introduction to Finite Mathematics [4]	5
		Total	**20**

Fifth Quarter

BT	160	Job Preparation Techniques	3
BT	250	Information Technology	5
BT	260	Administrative Office Management	5
BT	280	Project Management for the Office	2.5
CATT	241	Microsoft Project	2.5
		Total	**18**

Sixth Quarter

BT	263	Integrated Office Applications	5
BT	285	Administrative Professional Internship	2
CATT	128	Desktop Publishing	5
MMGT	231	Human Resource Management	5
		Total	**17**

102.5 credits are required for the AAS

[1] BUS 103 may be substituted with BT 128.
[2] ACCT& 201 may be substituted with ACCT 151.
[3] BUS 204 may be substituted with BUS& 201.
[4] MATH 201 may be substituted with BUS 217 or MATH 221, both courses require prerequisite MATH 099 or appropriate placement score.

AEROSPACE COMPOSITE TECHNICIAN
Certificate: SCC

This program provides a common core of courses that all students enroll in before entering the job–specific coursework. The knowledge and skills gained through this program are those required for entry–level positions as aerospace composite technicians. The certificate also provides an opportunity for existing aircraft mechanics and service technicians to expand their education in the field of composite assembly and repair. Courses in this certificate are not FAA approved.

Students in the Aerospace Composite Technician program may transfer into either an A.A.S. degree or certificate program listed below:

- Aviation Maintenance Technology
- Airframe Maintenance
- General Aircraft/Powerplant Maintenance
- Computer Aided Design and Drafting (CAD)
- Electronics Engineering Technician–Avionics
- Electrical Maintenance and Automation
- Machinist–Computer Numerical Control (CNC)
- Mechanical Engineering Technology
- Hydraulic and Pneumatic Automation Technology

Certificate

First Quarter

APLED	112	Applied Mathematics [1]	2
APLED	121	Applied Written Communication [1]	4
CAD	105	Basic Blueprint Reading	2
MACH	247	CNC Theory	5
MET	134	Applied Precision Measuring	3
		Total	**16**

Second Quarter

APLED	112	Applied Mathematics [1]	3
ARCFT	123	Composite Technology	5
CAD	129	Computer Aided Drafting	2
MACH	248	CNC Lab	5
MET	247	Shop Practices	2
		Total	**17**

Third Quarter

APLED	125	Employment Preparation [1]	3
ARCFT	131	Composite Structure Assembly	5
ARCFT	132	Applied Manufacturing Project	2
CAD	241	CAD Solid Modeling	3
MACH	138	Manufacturing Standards/Quality	3
		Total	**16**

49 credits are required for the Certificate

[1] This related education requirement may be met by any course or combination of courses approved by the department dean.

AGRICULTURE BUSINESS
AAS, Certificate: SCC

The Agriculture Business program is designed to train students for entry–level employment in the agricultural chemical and fertilizer industry as well as grain and farming operations. Program graduates are qualified for advancement into sales, service, field representative and branch management positions.

AAS

First Quarter

AGHRT	102	Pesticides and Fertilizer Application Equipment	2
AGHRT	104	Principles of Pest Management	5
AGHRT	171	Agricultural Leadership Training [1]	1
BUS&	101	Intro to Business	5
ENGL&	101	English Composition I [2]	5
		Total	**18**

Second Quarter

AGHRT	101	Basic Crop Science [1]	5
AGHRT	172	Agricultural Leadership Training [1]	1
BUS	103	Basic Business Math and Electronic Calculators	5
ENVS	110	Plant Biology [2]	5
		Total	**16**

Third Quarter

AGHRT	225	Weed Biology and Control [1]	5
BUS	104	Business Mathematics	5
CIS	110	Introduction to Computer Applications [3]	5
ENVS	210	Environmental Soil Science [1]	5
		Total	**20**

Fourth Quarter

AGHRT	230	Plant Problem Diagnosis [1]	5
AGHRT	232	Pest Management Project [1]	2
CMST&	101	Introduction to Communication [4]	5
WATER	109	Introduction to Water Resources [1]	5
		Total	**17**

Fifth Quarter

AGHRT	219	Soil Management and Fertility [1]	5
BUS	280	Human Relations in Business	5
ENGL&	102	Composition II [5]	5
		Total	**15**

Sixth Quarter

ACCT	151	College Accounting I [6]	5
ECON	100	Fundamentals of Economics [7]	5
MMGT	100	Supervised Volunteer Experience	1
MMGT	101	Principles of Management	5
		Total	**16**

102 credits are required for the AAS

[1] Students are advised to check with the instructional dean to determine which quarter this course will be offered.
[2] Students are advised to check with the instructional dean to determine which quarter this course will be offered. This related education requirement may be met by any course or combination of courses approved by the instructional dean.
[3] Keyboard skills are required.
[4] CMST& 101 may be substituted with CMST 287.
[5] ENGL& 102 may be substituted with ENGL& 235 or BT 272 (BT 109 is a prerequisite).
[6] This course may be substituted with ACCT& 201.
[7] ECON may be substituted with a higher level ECON course.

Certificate
First Quarter

AGHRT	102	Pesticides and Fertilizer Application Equipment	2
AGHRT	104	Principles of Pest Management	5
AGHRT	171	Agricultural Leadership Training [1]	1
BUS&	101	Intro to Business	5
ENGL&	101	English Composition I [2]	5
		Total	**18**

Second Quarter

AGHRT	101	Basic Crop Science [1]	5
AGHRT	172	Agricultural Leadership Training [1]	1
BUS	103	Basic Business Math and Electronic Calculators	5
ENVS	110	Plant Biology [2]	5
		Total	**16**

Third Quarter

AGHRT	225	Weed Biology and Control [1]	5
BUS	104	Business Mathematics	5
CIS	110	Introduction to Computer Applications [3]	5
ENVS	210	Environmental Soil Science [1]	5
		Total	**20**

54 credits are required for the Certificate

[1] Students are advised to check with the instructional dean to determine which quarter this course will be offered.
[2] Students are advised to check with the instructional dean to determine which quarter this course will be offered. This related education requirement may be met by any course or combination of courses approved by the instructional dean.
[3] Keyboard skills are required.

Spray Technician
SCC's one–quarter Spray Technician Certificate program is designed to provide entering students or currently employed individuals with the skills needed to succeed in an entry–level position applying pesticides and fertilizers in landscape maintenance and agrichemical industries.

First Quarter

AGGEN	156	Equipment Operation and Maintenance	5
AGHRT	102	Pesticides and Fertilizer Application Equipment [1]	4
AGHRT	104	Principles of Pest Management	5
		Total	**14**

14 credits are required for the Certificate

[1] Students are advised to check with the instructional dean to determine which quarter this course will be offered.

AGRICULTURE PRE-MAJOR
AA–DTA: SCC

Agriculture is one of the biggest businesses in the United States as well as Washington State. Although training in agriculture provides a good background for successful modern farming, it also prepares young men and women for several hundred different kinds of occupations having to do with agribusiness, technical and professional work in teaching, research and extension with state, federal, and private agencies.

AA–DTA

	Suggested Courses to Consider [1]	90
	Total	**90**

90 credits are required for the AA–DTA

[1] Consult a counselor or academic adviser for recommended courses specific to student's choice of transfer institution.

ANTHROPOLOGY PRE-MAJOR
AA–DTA: SCC/SFCC

Anthropology is the science of humans. It studies humans in relation to their distribution, origin, classification, culture, physical character, environment, and social relations. It strives to understand all humans and give us a better awareness of ourselves.

AA–DTA

	Suggested Courses to Consider [1]	90
	Total	**90**

90 credits are required for the AA–DTA

[1] Consult a counselor or academic adviser for recommended courses specific to student's choice of transfer institution.

ARCHITECTURAL TECHNOLOGY
AAS, Certificate: SCC

The Architectural Technology program prepares students to become CAD drafters for the building design industry. Students focus on gaining proficiency with Computer Aided Drafting (CAD), 3–D modeling and Building Information Modeling (BIM) applications utilizing principles of design, the design process,

building codes and building materials as they relate to building projects. This program prepares the drafter to translate ideas, rough sketches, specifications, calculations and existing drawings into drawings used within each phase of the design and construction process.

Students enter the program in the fall quarter. Program classes are typically held 7:30 am –2:30 or 3:30 pm, Monday through Thursday. Please note that the classes listed below are intended for program students only. Other students are only allowed to register upon the approval of the instructor after prerequisites have been met. Students are expected to do a significant amount of reading and should be able to work at a computer for seven hours per day.

The first year consists of developing residential building design drawings and documents used by architects and building design engineers. Students use the most commonly used software utilized in the building design industry to gain proficiency in 2–D and 3–D Computer Aided Drafting (CAD). In addition, the first year consists of manual drafting, orthographic projections, freehand sketching, presentation graphics (isometric and perspective pictorial drawing), light construction principles (materials and methods), use of drafting expressions, international residential codes and sustainability issues. Emphasis is placed on architectural construction documents, which include site plans, floor plans, roof plans, footing and foundation plans, framing plans, exterior elevations, building and wall sections, window and door schedules, stair design, interior elevations, details and plumbing, HVAC, electrical and lighting plans. Graphic representation using computer software is used in the production of documents of the common phrases of architectural design including programming, schematic design, design development and construction documents. Utilization of the above is finalized in the development of residential working drawings.

Students will receive a Residential Architectural Technology Certificate after completing the first three quarters of the AAS degree. Prior to taking courses in this program, students in this program who intend to further their education at a university should consult an academic advisor at SCC or their future university to determine which of the courses in this program are transferable to a university.

The second year consists of developing architectural working drawings using Computer Aided Drafting (CAD) and Building Information Modeling (BIM) related to commercial building design. Class projects will be developed from a preliminary design utilizing drafting techniques, standards and practices of the profession, including office procedure knowledge, use of building materials; structural framing systems as used in the building industry and study of the International Building Code.

AAS

First Quarter

APLED	121	Applied Written Communication [1]	4
ARCHT	112	Introduction to Architectural Drafting	7
ARCHT	120	Residential Architecture Theory	3
ARCHT	126	Introduction to Computer Aided Drafting	5
		Total	**19**

Second Quarter

ARCHT	114	Architectural Math	3
ARCHT	122	Basic Residential Drafting	7
ARCHT	130	Residential Building Materials	4
ARCHT	134	Electrical and Mechanical Systems	3
		Total	**17**

Third Quarter

APLED	123	Leadership Skills for Business and Industry[1]	3
ARCHT	124	Advanced Architectural Math	2
ARCHT	125	Residential Building Codes	2
ARCHT	132	Advanced Residential Drafting/CAD	7
ARCHT	139	Delineation	4
		Total	**18**

Fourth Quarter

ARCHT	138	CAD Applications	5
ARCHT	240	Commercial Building Codes	3
ARCHT	242	Introduction to Commercial Drafting/CAD	8
ARCHT	246	Commercial Architecture Theory	3
		Total	**19**

Fifth Quarter

APLED	125	Employment Preparation [1]	3
ARCHT	250	Introduction to Commercial Building Materials	4
ARCHT	251	Advanced Commercial Building Codes	3
ARCHT	252	Basic Commercial Drafting/CAD	8
		Total	**18**

Sixth Quarter

ARCHT	196	Special Problems [2]	4
ARCHT	262	Advanced Commercial Drafting/CAD [3]	10
ARCHT	263	Advanced Commercial Building Materials [2]	4
		Total	**18**

109 credits are required for the AAS

Elective

ARCHT	266	Cooperative Education Seminar [3]	1-2
ARCHT	267	Cooperative Education Work Experience[3]	1-18

[1] This related education requirement may be met by any course or combination of courses approved by the instructional dean.

[2] ARCHT 266 and ARCHT 267 or ARCHT 288 (no seminar) may be substituted for one or more of these courses with permission of the instructor.

[3] Select ARCHT 262 for either 10 credits and no elective credits or 5–7 credits with the remainder of the 10 credits from the elective group consisting of: ARCHT 266, 267 for a total of 18 required credits for the sixth quarter.

Certificate

First Quarter

APLED	121	Applied Written Communication [1]	4
ARCHT	112	Introduction to Architectural Drafting	7
ARCHT	120	Residential Architecture Theory	3
ARCHT	126	Introduction to Computer Aided Drafting	5
		Total	**19**

Second Quarter

ARCHT	114	Architectural Math	3
ARCHT	122	Basic Residential Drafting	7
ARCHT	130	Residential Building Materials	4
ARCHT	134	Electrical and Mechanical Systems	3
		Total	**17**

Third Quarter

APLED	123	Leadership Skills for Business and Industry[1]	3
ARCHT	124	Advanced Architectural Math	2
ARCHT	125	Residential Building Codes [1]	2
ARCHT	132	Advanced Residential Drafting/CAD	7
ARCHT	139	Delineation	4
		Total	**18**

54 credits are required for the Certificate

[1] This related education requirement may be met by any course or combination of courses approved by the instructional dean.

ART (ASSOCIATE OF FINE ARTS DEGREE) AFA: SFCC

The Associate of Fine Arts (AFA) program offers a solid foundation of art courses and some general undergraduate requirements for the student intending to pursue a liberal arts degree or a Fine Arts degree (BFA) at a four–year institution or for the student who will transfer to a professional art school. The AFA prepares students to transfer to a four–year institution with a minimum of 90 credits, which include many general university requirements. Art schools and university art departments may require that portfolios be submitted for admission into art programs. The AFA
provides the student an opportunity to prepare a portfolio of original work. In addition, the AFA provides the student an opportunity to develop his/her skills and explore various avenues of creative image making.

Faculty coaching of studio and academic work is essential for this degree. At least 30 credits in art must be earned at Spokane Falls Community College, including the final quarter of the program. A cumulative grade point of 2.0 or better must be maintained. Students should meet with their art adviser to review the catalog and/or transfer manual of the school to which they plan to transfer before selecting courses.

Contact the SFCC Art Department for articulated AFA agreements with Washington State University and The Evergreen State College.

AFA

First Quarter

ART&	100	Art Appreciation [1]	5
ART	101	Fundamentals of Drawing	4
ART	105	Color and Design	5
ART	122	Health and Safety in Art	1
		Additional Studio Class Recommended [2]	0-5
		Total	**15–20**

Second Quarter

ART	102	Drawing Composition [3]	4
ART	106	3-D Design	4
ART	112	Non-Western Art [4]	5
ENGL&	101	English Composition I	5
		Total	**18**

Third Quarter

ART	110	Modern Art [5]	5
ART	161	Portfolio I [6]	1
ART	180	Watercolor [7]	4
ART	202	Figure Drawing	3
		Lab Science Elective	5
		Total	**18**

Fourth Quarter

ART	130	Sculpture [8]	4
CMST&	101	Introduction to Communication [9]	5
MATH&	107	Math in Society	5
		Additional Studio Class Recommended [2]	0-5
		Total	**14–19**

Fifth Quarter

ART	205	Ceramics [10]	4
		Additional Studio Class Recommended [2]	0-5
		Non-Art Humanities Elective	5
		Social Sciences Elective	5
		Total	**14–19**

Sixth Quarter

ART	186	Oil Painting [11]	4
ART	261	Exhibit [6]	1
		Additional Studio Class Recommended [2]	0-5
		Art Elective [12]	3-4
		Social Sciences Elective	5
		Total	**13–19**

92-113 credits are required for the AFA

[1] ART& 100 may be substituted with ART 108 or 112.
[2] The faculty recommend that you take one (1) additional studio class during this quarter to build a stronger portfolio.
[3] ART 102 may be substituted with ART 103.
[4] ART 112 may be substituted with ART& 100 or ART 109.
[5] ART 110 should be taken in the first year of the two–year program and is offered spring quarter only. Student cannot complete ART 161 without completing ART 110.
[6] ART 161 and 261 are required classes. ART 161 is taught fall and spring quarters only and must be taken PRIOR to ART 261, which is taught spring quarter only.
[7] ART 180 may be substituted with ART 186 or 188.
[8] ART 130 may be substituted with ART 147, 189, 202 or 205.
[9] CMST& 101 may be substituted with ENGL& 102
[10] ART 205 may be substituted with ART 130 or 194.
[11] ART 186 may be substituted with ART 180, 188, 190, 191, 192 or 193.
[12] Any art course will serve as an art elective. Some classes can be repeatable courses. See college catalog for listing of courses and repeatable courses.

ART (CERTIFICATE IN FINE ARTS) CFA–2D, CFA–3D: SFCC

The Certificate in Fine Arts (CFA) affirms completion of work and is suitable for art professionals, but is not a transfer certificate. However, the courses are above 100 and are listed in many catalogs for four–year colleges and universities. Most courses will transfer. The program can be completed in two years. To develop a better assimilation of concepts and skills, a longer time span may be suggested for some students.

Each CFA student is assigned an art adviser who helps plan his or her program. Students must submit a portfolio and participate in an exhibition during their final quarter. A candidate for a Certificate in Fine Arts must complete a minimum of 96 quarter hours with a grade point average of 2.0 or better. The art adviser and art faculty will work with and evaluate the work of the student before final approval and recommendation to award the Certificate in Fine Arts.

The faculty recommends that you take one additional studio class during the first quarter to build a stronger portfolio. Not all art classes are offered every quarter. Please contact the art department for course offerings.

CFA–2D

First Quarter

ART&	100	Art Appreciation [1]	5
ART	101	Fundamentals of Drawing	4
ART	105	Color and Design	5
ART	122	Health and Safety in Art	1
		Additional Studio Class Recommended [2]	0-5
		Total	**15–20**

Second Quarter

ART	102	Drawing Composition [3]	4
ART	106	3-D Design	4
		Communication Elective	5
		Repeatable Painting Course	4
		Total	**17**

Third Quarter

ART	110	Modern Art [4]	5
ART	161	Portfolio I [5]	1
ART	202	Figure Drawing	3

		Art Elective [6]	4
		Repeatable Required Course - List 1	4
		Total	**17**

Fourth Quarter

ART	147	Advanced Design	3
ART	201	Experimental Drawing [7]	3
		Printmaking Elective	4
		Repeatable Painting Course	4
		Repeatable Required Course - List 1	4
		Total	**18**

Fifth Quarter

ART	191	Screen Printing	4
		Art Elective [6]	5
		Computation Elective [8]	3-5
		Repeatable Painting Course	4
		Total	**16–18**

Sixth Quarter

ART	202	Figure Drawing	3
ART	261	Exhibit [5]	1
		Art Elective [6]	6
		Human Relations Elective	3-5
		Total	**13–15**

96-105 credits are required for the CFA–2D

Computation Elective

BUS	103	Basic Business Math and Electronic Calculators [8]	5
BUS	104	Business Mathematics [8]	5
BUS	111	Math Skills [8]	1
BUS	112	Advanced Calculator Skills [8]	1
BUS	113	Essential Business Applications [8]	1
BUS	114	Basic Retail Application [8]	1

Human Relations Elective

BUS	105	Principles of Leadership	3
HS	136	Improving Interpersonal Communication	5

Printmaking Elective

ART	189	Printmaking	4
ART	190	Printmaking Relief	4
ART	192	Printmaking, Intaglio	4

Repeatable Ceramics Course

ART	205	Ceramics	4
ART	206	Advanced Ceramics	4

Repeatable Painting Course

ART	180	Watercolor	4
ART	186	Oil Painting	4
ART	188	Acrylic Painting	4

Repeatable Required Course – List 1

ART	130	Sculpture	4
ART	205	Ceramics	4

Repeatable Required Course – List 2

ART	127	Visual Arts Special Workshops	1-15
ART	194	Jewelry	3

Repeatable Required Course – List 3

ART	127	Visual Arts Special Workshops	1-15
ART	147	Advanced Design	3
ART	194	Jewelry	3

[1] ART& 100 may be substituted with ART 108 or 112.
[2] The faculty recommend that you take one (1) additional studio class during this quarter to build a stronger portfolio.
[3] ART 102 may be substituted with ART 103.
[4] ART 110 should be taken in the first year of the two–year program and is offered spring quarter only. Student cannot complete ART 161 without completing ART 110.
[5] ART 161 and 261 are required classes. ART 161 is taught fall and spring quarters only and must be taken prior to ART 261, which is taught spring quarter only.
[6] Any art course will serve as an art elective. Some classes may be repeatable courses. See college catalog for listing of courses and repeatable courses.
[7] ART 201 may be substituted with ART 202.
[8] May be substituted with any MATH course 100 level or above.

CFA–3D

First Quarter

ART&	100	Art Appreciation [1]	5
ART	101	Fundamentals of Drawing	4
ART	105	Color and Design	5
ART	122	Health and Safety in Art	1
		Additional Studio Class Recommended [2]	0-5
		Total	**15–20**

Second Quarter

ART	102	Drawing Composition [3]	4
ART	106	3-D Design	4
		Communication Elective	5
		Repeatable Painting Course	4
		Total	**17**

Third Quarter

ART	110	Modern Art [4]	5
ART	161	Portfolio I [5]	1
ART	202	Figure Drawing	3
		Art Elective [6]	4
		Repeatable Required Course - List 1 [6]	4
		Total	**17**

Fourth Quarter

ART	130	Sculpture	4
ART	147	Advanced Design	3
ART	202	Figure Drawing	3
		Repeatable Ceramics Course	4
		Repeatable Required Course - List 2	3
		Total	**17**

Fifth Quarter

ART	130	Sculpture	4
		Art Elective [6]	2
		Computation Elective [8]	3-5
		Repeatable Ceramics Course	4
		Repeatable Required Course - List 3	3
		Total	**16–18**

Sixth Quarter

ART	261	Exhibit [5]	1
		Art Elective [6]	10
		Human Relations Elective	3-5
		Total	**14–16**

96-105 credits are required for the CFA–3D

Computation Elective

BUS	103	Basic Business Math and Electronic Calculators [8]	5
BUS	104	Business Mathematics [8]	5
BUS	111	Math Skills [8]	1
BUS	112	Advanced Calculator Skills [8]	1
BUS	113	Essential Business Applications [8]	1
BUS	114	Basic Retail Application [8]	1

Human Relations Elective

BUS	105	Principles of Leadership	3
HS	136	Improving Interpersonal Communication	5

Printmaking Elective

ART	189	Printmaking	4
ART	190	Printmaking Relief	4
ART	192	Printmaking, Intaglio	4

Repeatable Ceramics Course

ART	205	Ceramics	4
ART	206	Advanced Ceramics	4

Repeatable Painting Course

ART	180	Watercolor	4
ART	186	Oil Painting	4
ART	188	Acrylic Painting	4

Repeatable Required Course – List 1

ART	130	Sculpture	4
ART	205	Ceramics	4

Repeatable Required Course – List 2

ART	127	Visual Arts Special Workshops	1-15
ART	194	Jewelry	3

Repeatable Required Course – List 3

ART	127	Visual Arts Special Workshops	1-15
ART	147	Advanced Design	3
ART	194	Jewelry	3

[1] ART& 100 may be substituted with ART 108 or 112.
[2] The faculty recommend that you take one (1) additional studio class during this quarter to build a stronger portfolio.
[3] ART 102 may be substituted with ART 103.
[4] ART 110 should be taken in the first year of the two–year program and is offered spring quarter only. Student cannot complete ART 161 without completing ART 110.
[5] ART 161 and 261 are required classes. ART 161 is taught fall and spring quarters only and must be taken prior to ART 261, which is taught spring quarter only.
[6] Any art course will serve as an art elective. Some classes may be repeatable courses. See college catalog for listing of courses and repeatable courses.
[7] ART 201 may be substituted with ART 202.
[8] May be substituted with any MATH course 100 level or above.

ART PRE-MAJOR
AA–DTA: SFCC

A primary purpose of the Art Department is to offer a solid foundation of academic and studio art courses for transfer to a four–year institution. The AA degree is one of two options in art for transfer. The AA degree might be chosen by the student pursuing a liberal arts degree with an art minor or major. He/she may complete all basic art requirements at Spokane Falls Community College. An art pre–major could lead to a degree in art education, art therapy, art history, arts administration, or museum studies.

The core of art courses will provide a foundation for a liberal arts degree at a four–year institution. Some four–year institutions and most art schools, however, require many more studio courses and a portfolio of original art for admission into a fine arts program. If the SFCC student, after having checked the requirements of the transfer institution, needs to build a portfolio and strengthen his/her skills, that student might best select the AFA program.

AA–DTA

	Suggested Courses to Consider [1]	90
	Total	**90**

90 credits are required for the AA–DTA

[1] A total of 35 credits of the AA degree may be fulfilled by a careful selection of art courses. Consult an art adviser for recommended art courses specific to a student's professional interest and choice of transfer institution.

AUDIO ENGINEERING
AAS, Certificate: SFCC

The objective of this program is to prepare students for entry–level jobs and for self–employment in the entertainment industry in the areas of audio production, recording, live sound engineering and as broadcast and audio equipment technicians.

The certificate and first year of the AAS degree provides a basic understanding of the music technology/audio engineering field. Students learn principles and procedures of studio recording live sound reinforcement, location recording, basic principles of synthesis and MIDI technology and gain a thorough understanding of the delivery formats used in music production. Students also receive training on state of the art digital audio workstations. Starting the first year and again in the second year of study, each student completes a major studio–recording project that involves recording, editing and mixing a student or professional band and culminates in developing an audio portfolio for inclusion in their professional resume. The first year also includes basic music theory, functional piano skills and study of the business aspects of the music and entertainment industries.

The second year of the degree program provides intensive study of digital audio workstations as well as advanced study and implementation of recording techniques and live sound engineering as students develop their recording, editing and mixing skills. Students will also hone their audio production skills with classes in advanced MIDI production and arrangement techniques, contemporary harmony, song writing and scoring for film, TV and multi–media. System set up and maintenance is also addressed in the second year providing students with an understanding of electronics and maintenance procedures relative to the recording industry. Finally, in the sixth quarter of study, students participate in an audio internship where they gain experience working on location at a professional recording studio, post–production facility or live sound venue.

Admission Requirements:

- Admission to Audio Engineering requires students to complete an application process, which includes a college application, placement scores in reading, writing and math, an essay and an interview. So long as there is room in the program, ALL students who complete the application process are admitted. If the number of applicants exceeds the number of available slots, students are selected for admission based on their placement scores (reading, writing, and math), knowledge of audio engineering and music, communication skills (written and spoken) and goals. For detailed information regarding the application process, visit the Audio Engineering website and see tab labeled "Apply".

AAS

First Quarter

AUDIO	116	Music Basics for Audio Professionals [1]	5
AUDIO	117	Introduction to Music Technology	5
AUDIO	155	Introduction to Recording	5
MUSC	166	Functional Piano I [2]	2
		Total	**17**

Second Quarter

AUDIO	113	Live Sound and Location Recording I	3
AUDIO	120	Digital Audio I	4

MUSC	114	Contemporary Harmony	3
MUSC	167	Functional Piano II [2]	2
		Computation Related Instruction Requirement [4]	5
		Total	**17**

Third Quarter

AUDIO	121	Digital Audio II	4
AUDIO	151	Audio Project I	1
AUDIO	156	Audio Engineering I	4
		Human Relations/Leadership Related Instruction Req [4]	5
		Total	**14**

Fourth Quarter

AUDIO	213	Live Sound II	4
AUDIO	217	System Setup and Maintenance	3
AUDIO	218	Digital Audio III	5
MUSC	214	Contemporary Harmony II/Songwriting	5
		Total	**17**

Fifth Quarter

AUDIO	205	MIDI Arranging	5
AUDIO	219	Digital Audio IV	5
AUDIO	255	Audio Engineering II	4
		Communication Related Instruction Requirement [4]	5
		Total	**19**

Sixth Quarter

AUDIO	206	Scoring for Film and Multi-Media [3]	5
AUDIO	220	Digital Audio V	5
AUDIO	251	Audio Projects II	1
AUDIO	260	Audio Portfolio	1
AUDIO	266	Cooperative Education Seminar	1
AUDIO	267	Cooperative Education Work Experience	1-3
		Total	**14–16**

98-100 credits are required for the AAS

Communication Related Instruction Requirement

CMST&	101	Introduction to Communication	5
CMST	121	Job Communication Skills	5
CMST&	210	Interpersonal Communication	5
CMST	226	Gender Communication	5
CMST	227	Intercultural Communication	5
ENGL&	101	English Composition I	5
ENGL	105	Pro/Tech: Basic Writing	5
JOURN	220	Introduction to News Writing	5

Computation Related Instruction Requirement

BUS	104	Business Mathematics	5
BUS	123	Practical Business Math Applications	5
MATH	090	Pre-Algebra	5
MATH	093	Algebra I	5
MATH	094	Algebra II	5
MATH	098	Algebra III	5
MATH&	107	Math in Society	5

Human Relations/Leadership Related Instruction Req

ANTH&	206	Cultural Anthropology	5
AUDIO	159	Business of Music	5
BUS	280	Human Relations in Business	5
HS	136	Improving Interpersonal Communication	5
HUM	107	Introduction to Cultural Studies	5
MMGT	101	Principles of Management	5
MMGT	125	Social Media Marketing	5
POLS	125	Introduction to Global Issues	5
PSYC&	100	General Psychology	5
SOC&	101	Intro to Sociology	5
SOC&	201	Social Problems	5
SOC	221	Race and Ethnic Relations	5
SOC	230	Sociology of Gender	5

[1] AUDIO 116 may be substituted with MUSC& 141.
[2] Please consult with AUDIO faculty advisor prior to selecting course in functional piano.
[3] AUDIO 206 may be substituted with AUDIO 256.
[4] A minimum of 5 credits of related instruction must be taken in each area of competency; Communications, Computation, Human Relations/Leadership. Please consult with faculty advisor prior to selecting related instruction courses. A class cannot be used to fulfill more than one area.

Certificate
First Quarter

AUDIO	116	Music Basics for Audio Professionals [1]	5
AUDIO	117	Introduction to Music Technology	5
AUDIO	155	Introduction to Recording	5
MUSC	166	Functional Piano I [2]	2
		Total	**17**

Second Quarter

AUDIO	113	Live Sound and Location Recording I	3
AUDIO	120	Digital Audio I	4
MUSC	114	Contemporary Harmony	3
MUSC	167	Functional Piano II	2
		Total	**12**

Third Quarter

AUDIO	121	Digital Audio II	4
AUDIO	151	Audio Project I	1
AUDIO	156	Audio Engineering I	4
		Program Elective - See advisor for options	3
		Total	**12**

41 credits are required for the Certificate

[1] AUDIO 116 may be substituted with MUSC& 141.
[2] Please consult with AUDIO faculty advisor prior to selecting course in functional piano.

AUTOMOTIVE COLLISION AND REFINISHING TECHNICIAN AAS, Certificate: SCC

The Automotive Collision and Refinishing Technician program teaches skills including metalwork, glasswork, refinishing, and welding. Instruction is primarily by demonstration and individual help in a shop situation where field conditions are simulated. This includes wire feed; plastic repair; a study of basic hand tools and their uses; basic metal straightening techniques; use of modern shop equipment; and basic refinishing methods. The advanced portion of the course involves practical applications in metal straightening; body and panel alignment; frame and chassis repair; and body repair including both major damage and miscellaneous repair. Modern refinishing and paint techniques are included.

A comprehensive study of automobile refinishing, material damage estimating, insurance procedures, and shop procedures is emphasized.

Students must complete each ABF and related course with a 2.0 grade or better before advancing to subsequent quarters.

AAS
First Quarter

ABF	113	Introduction to Job Safety, Tools, and Equipment	4
ABF	114	Introduction to Unibody and Frame Alignment and Repair	4
ABF	115	Basic Metal Straightening and Panel Alignment	4
ABF	116	Parts Identification	4
APLED	112	Applied Mathematics [1]	4
		Total	**20**

Second Quarter

ABF	117	Automotive Collision MIG Welding	3
ABF	243	Unibody and Frame Alignment and Repair	6
ABF	244	Advanced Metal Straightening and Panel Alignment Methods	5
APLED	121	Applied Written Communication [1]	4
		Total	**18**

Third Quarter

ABF	123	Major Panel Replacement	5
ABF	124	Mechanical Components	3
ABF	125	Major Unibody and Frame Repair	5
ABF	126	Fundamentals of Shop Procedures	3
APLED	125	Employment Preparation [1]	3
		Total	**19**

Fourth Quarter

ABF	133	Introduction to Industrial Safety and Hygiene	3
ABF	134	Introduction to Interior and Exterior Surface Preparation	4
ABF	135	Basic Polishing and Detailing	3
ABF	136	Introduction to Topcoat Systems and Application Procedures	3
ABF	137	Basic Color Matching and Paint Mixing Fundamentals	3
APLED	112	Applied Mathematics [1]	4
		Total	**20**

Fifth Quarter

ABF	138	Intermediate Interior and Exterior Surface Preparation	4
ABF	139	Intermediate Paint Application, Color Matching, and Paint Mixing	4
ABF	140	Materials and Cost Estimation	3
ABF	141	Intermediate Finessing, Compounding, and Detailing	5
APLED	121	Applied Written Communication [1]	4
		Total	**20**

Sixth Quarter

ABF	263	Advanced Interior and Exterior Surface Preparation [2]	4
ABF	264	Advanced Paint Application, Color Matching, and Paint Mixing [2]	4
ABF	265	Materials and Cost Estimation [2]	3
ABF	268	Advanced Finessing, Compounding, and Detailing [2]	5
		Total	**16**

113 credits are required for the AAS

[1] This related education requirement may be met by any course or combination of courses approved by the instructional dean. APLED 112 for second year students will substitute with APLED 123 for 4 credits. APLED 121 for second year students will substitute with APLED 113.

[2] ABF 266 and 267 or ABF 288 may be substituted for ABF courses in the sixth quarter with permission of the instructor.

Certificate
Automotive Collision Technician
First Quarter

ABF	113	Introduction to Job Safety, Tools, and Equipment	4
ABF	114	Introduction to Unibody and Frame Alignment and Repair	4
ABF	115	Basic Metal Straightening and Panel Alignment	4
ABF	116	Parts Identification	4
APLED	112	Applied Mathematics [1]	4
		Total	**20**

Second Quarter

ABF	117	Automotive Collision MIG Welding	3
ABF	243	Unibody and Frame Alignment and Repair	6
ABF	244	Advanced Metal Straightening and Panel Alignment Methods	5
APLED	121	Applied Written Communication [1]	4
		Total	**18**

Third Quarter

ABF	123	Major Panel Replacement	5
ABF	124	Mechanical Components	3
ABF	125	Major Unibody and Frame Repair	5
ABF	126	Fundamentals of Shop Procedures	3
APLED	125	Employment Preparation	3
		Total	**19**

57 credits are required for the Certificate

[1] This related education requirement may be met by any course or combination of courses approved by the instructional dean. APLED 112 for second year students will substitute with APLED 123 for 4 credits. APLED 121 for second year students will substitute with APLED 113.

Automotive Refinishing Technician
First Quarter

ABF	133	Introduction to Industrial Safety and Hygiene	3
ABF	134	Introduction to Interior and Exterior Surface Preparation	4
ABF	135	Basic Polishing and Detailing	3
ABF	136	Introduction to Topcoat Systems and Application Procedures	3
ABF	137	Basic Color Matching and Paint Mixing Fundamentals	3
APLED	112	Applied Mathematics [1]	4
		Total	**20**

Second Quarter

ABF	138	Intermediate Interior and Exterior Surface Preparation	4
ABF	139	Intermediate Paint Application, Color Matching, and Paint Mixing	4
ABF	140	Materials and Cost Estimation [1]	3
ABF	141	Intermediate Finessing, Compounding, and Detailing	5
APLED	121	Applied Written Communication [1]	4
		Total	**20**

Third Quarter

ABF	263	Advanced Interior and Exterior Surface Preparation	4
ABF	264	Advanced Paint Application, Color Matching, and Paint Mixing	4
ABF	265	Materials and Cost Estimation [1]	3
ABF	268	Advanced Finessing, Compounding, and Detailing	5
APLED	125	Employment Preparation [1]	3
		Total	**19**

59 credits are required for the Certificate

[1] This related education requirement may be met by any course or combination of courses approved by the instructional dean. APLED 112 for second year students will substitute with APLED 123 for 4 credits. APLED 121 for second year students will substitute with APLED 113.

AUTOMOTIVE TECHNOLOGY
AAS, Certificate: SCC

The Automotive Technology program prepares students for employment in many areas of the automotive field including dealerships, independent garages, fleet shops, service stations and specialty shops which cover areas such as tune–ups and brakes. Students may enter the program in any of the first five quarters. The one–year certificate requires completion of any three quarters of the automotive technology program and the three related classes identified in footnote 1. This flexible schedule also enables students to receive short–term certificates while pursuing their degree. Students must complete each AUTO course with a 2.0 grade or better before advancing to subsequent quarters.

AAS

First Quarter

AGGEN	158	Oxy-acetylene Welding	1
AUTO	115	Theory of Electronics and Accessories	4
AUTO	116	Diagnosis of Electronics and Accessories	5
AUTO	215	Advanced Theory of Electronics and Accessories	3
AUTO	216	Advanced Diagnosis of Electronics and Accessories	4
		Total	**17**

Second Quarter

APLED	112	Applied Mathematics [1]	4
AUTO	211	Theory of Engines	7
AUTO	212	Theory and Application of Engine Repair	9
		Total	**20**

Third Quarter

AGGEN	161	Advanced Maintenance Welding	1
AUTO	117	Theory of Engine Performance	5
AUTO	118	Diagnosis of Engine Performance	6
AUTO	119	Theory of Air Conditioning	2
AUTO	120	Air Conditioning Applications	3
		Total	**17**

Fourth Quarter

APLED	121	Applied Written Communication [1]	4
AUTO	111	Theory of Brakes	3
AUTO	112	Theory and Application of Brake Repair	4
AUTO	131	Principles of Suspension Systems	4
AUTO	132	Service and Repair of Suspension Systems	5
		Total	**20**

Fifth Quarter

AUTO	113	Theory of Transmissions/Transaxles [2]	3
AUTO	114	Diagnosis of Transmissions/Transaxles [2]	4
AUTO	129	Principles of Automatic Transmissions [2]	4
AUTO	130	Service and Repair of Automatic Transmissions [2]	5
		Total	**16**

Sixth Quarter

APLED	125	Employment Preparation [1]	3
AUTO	122	Engine Performance, Service, and Repair [1]	5
AUTO	221	Advanced Principles of Engine Performance, Air Conditioning, and Electrical [2]	3
AUTO	228	Diagnosis of Hybrids	6
AUTO	230	Safety Procedures for Hybrids	2
		Total	**19**

Seventh Quarter

		Optional Summer Course - High Performance Engines [3]	0-16
		Total	**0–16**

109-125 credits are required for the AAS

Optional Summer Course – High Performance Engines

AUTO	270	High Performance Engines	16

[1] This related education requirement may be met with any course or combination of courses approved by the instructional dean.
[2] Auto 266 and 267 or 288 (no seminar) may be substituted. A maximum of 18 credits of cooperative education is allowed.
[3] AUTO 270 for automotive technology students desiring to receive additional training may be taken summer quarter either after the 3rd or 6th quarter. Instructor permission required. Completion of this course will entitle the student to a certificate of completion issued by the dean of instruction for technical education.

Certificate

Automotive Technology Certificate

The one–year certificate requires completion of any three quarters of the automotive technology program and the three related classes identified in footnote 1. This flexible schedule also enables students to receive short–term certificates while pursuing their degree. 56–58 credits are required for the certificate.

APLED	112	Applied Mathematics [1]	4
APLED	121	Applied Written Communication [1]	4
APLED	125	Employment Preparation [1]	3
		Any Three Quarters of AAS Degree [2]	45-47
		Total	**56–58**

56-58 credits are required for the Certificate

[1] This related education requirement may be met with any course or combination of courses approved by the instructional dean.
[2] The one–year certificate requires completion of any three quarters of the automotive technology program and the three related classes identified in the certificate option.

Automotive Transmissions/Transaxles

This short–term certificate program introduces students to the theory and operation of both manual and automatic transmissions/transaxles, differential, drive line, and constant velocity joints. Students learn the principles of steering and suspension systems including MacPherson struts and four–wheel alignment, late model transmissions, transaxles and sub assemblies. Practical applications include the diagnosis and repair of all types of transmissions/transaxles components.

First Quarter

AUTO	113	Theory of Transmissions/Transaxles	3
AUTO	114	Diagnosis of Transmissions/Transaxles	4
AUTO	129	Principles of Automatic Transmissions	4
AUTO	130	Service and Repair of Automatic Transmissions	5
		Total	**16**

16 credits are required for the Certificate

Brakes and Suspension

This short–term certificate provides students with both theory and practical lab applications in automotive brake, suspension and hydraulic systems. Students gain experience in the diagnosis and repair of the following systems and components: master cylinder and hydraulic systems, drum and disc brakes, parking brakes, machining of brake drums and rotors, power brake units, and anti–lock brake systems.

First Quarter

AUTO	111	Theory of Brakes	3
AUTO	112	Theory and Application of Brake Repair	4
AUTO	131	Principles of Suspension Systems	4
AUTO	132	Service and Repair of Suspension Systems	5
		Total	**16**

16 credits are required for the Certificate

Electronics/Electrical
This short–term certificate program introduces students to basic electrical concepts including Ohm's Law, magnetism, analog and digital meters, and test equipment. Students gain practical shop experience in the testing of such equipment as test lamps, voltmeters and ammeters. Hookup and testing of electronics and electrical components and circuits also are included.

First Quarter

AUTO	115	Theory of Electronics and Accessories	4
AUTO	116	Diagnosis of Electronics and Accessories	5
AUTO	215	Advanced Theory of Electronics and Accessories	3
AUTO	216	Advanced Diagnosis of Electronics and Accessories	4
		Total	**16**

16 credits are required for the Certificate

Engine Performance/Air Conditioning
This two–quarter certificate program emphasizes both engine performance and air conditioning systems and components. Content areas include ignition systems, fuel and exhaust/ emissions systems, theory of carburetion and ignition systems. Students are introduced to heating and air conditioning systems and gain practical shop experience in their diagnosis and repair procedures. An electronics/electrical certificate must be earned before taking these courses.

First Quarter

AUTO	117	Theory of Engine Performance	5
AUTO	118	Diagnosis of Engine Performance	6
AUTO	119	Theory of Air Conditioning	2
AUTO	120	Air Conditioning Applications	3
		Total	**16**

Second Quarter

AUTO	121	Principles of Engine Performance, Air Conditioning, and Electrical	4
AUTO	122	Engine Performance, Service, and Repair	5
AUTO	221	Advanced Principles of Engine Performance, Air Conditioning, and Electrical	3
AUTO	222	Advanced Engine Performance, Service, and Repair	4
		Total	**16**

32 credits are required for the Certificate

Engine Repair
This short–term engine repair certificate program provides students with theory and operation fundamentals of engine diagnosis. Students gain practical shop experience in engine repair, inspection of cylinder heads, valve trains, engine blocks, and lubrication and cooling systems.

First Quarter

AUTO	211	Theory of Engines	7
AUTO	212	Theory and Application of Engine Repair	9
		Total	**16**

16 credits are required for the Certificate

AUTOMOTIVE: TOYOTA T-TEN
AAS: SCC

The Automotive Technology program prepares students for employment in many areas of the automotive field including dealerships, independent garages, fleet shops, service stations and specialty shops which cover areas such as tune–ups and brakes. Students may enter the program in any of the first five quarters.

Students interested in receiving special training in Toyota T–TEN (Technical Education Network) may substitute specialized courses specifically catering to Toyota T–TEN option. Entrance into the program requires an interview with and permission of the instructor. Continuation within the course program requires permission of the instructor. Students must complete each AUTO course with a 2.0 grade or better before advancing to subsequent quarters.

AAS
First Quarter

AGGEN	158	Oxy-acetylene Welding	1
AUTO	101	Electrical Circuitry Theory	5
AUTO	102	Electrical Circuitry Applications [1]	3
AUTO	103	Electrical Wiring Diagrams [1]	5
AUTO	104	Advanced Diagnosis of Electronics	4
AUTO	110	Introduction to Toyota	1
		Total	**19**

Second Quarter

APLED	112	Applied Mathematics [1]	4
AUTO	108	Engine Theory	6
AUTO	109	Engine Repair Applications	2
AUTO	125	Toyota Engine Repair	4
AUTO	126	Toyota Engine Repair Lab	5
		Total	**21**

Third Quarter

AGGEN	161	Advanced Maintenance Welding	1
AUTO	134	Heating and Air Conditioning Lecture	5
AUTO	135	Heating and Air Conditioning Application	4
AUTO	219	Toyota Hybrid Service and Repair	3
AUTO	226	Hybrid Safety Service and Repair	4
		Total	**17**

Fourth Quarter

AUTO	133	Toyota Applications of Steering and Suspension Systems	4
AUTO	136	Toyota Theory of Brakes	5
AUTO	137	Toyota Brake Applications	4
AUTO	142	Principles of Steering and Suspension Systems	4
		Total	**17**

Fifth Quarter

APLED	121	Applied Written Communication [1]	4
AUTO	138	Manual Transmissions Lecture	4
AUTO	139	Toyota Manual Transmission Application	3
AUTO	140	Automatic Transmissions Lecture	4
AUTO	141	Toyota Automatic Transmission Applications	5
		Total	**20**

Sixth Quarter

APLED	125	Employment Preparation [1]	3
AUTO	123	Toyota Engine Performance I	4
AUTO	124	Toyota Engine Performance I Lab	4
AUTO	220	Toyota Engine Performance II	3
AUTO	223	Toyota Engine Performance II Lab	5
		Total	**19**

113 credits are required for the AAS

[1] This related education requirement may be met with any course or combination of courses approved by the instructional dean.

AVIATION MAINTENANCE TECHNOLOGY
AAS, Certificate: SCC

Approved courses in both airframe and powerplant mechanics are offered to meet the Federal Aviation Administration requirements. General aircraft courses offered the first two quarters are prerequisites to both the airframe and powerplant phase of the program. Students receive a well–rounded education in general aircraft mechanics the first two quarters of the program. Third–and fourth–quarter course offerings include both lecture and lab courses in airframe repair, and fifth–and sixth–quarter offerings include lecture and lab courses in powerplant repair. Courses to satisfy the requirements for an AAS degree will be by arrangement.

Graduates of the program are eligible to take the FAA examination for both the Airframe and Powerplant licenses. A minimum of 1,900 attendance hours is required to take these exams.

AAS

First Quarter

ARCFT	115	Introduction to General Aircraft Maintenance	5
ARCFT	116	Introduction to General Aircraft Maintenance Shop	4
ARCFT	117	General Aircraft Maintenance	5
ARCFT	118	General Aircraft Maintenance Shop	4
MATH	100	Vocational Technical Mathematics [1]	3-4
		Total	**21–22**

Second Quarter

ARCFT	119	Advanced General Aircraft Maintenance	5
ARCFT	120	Advanced General Aircraft Maintenance Shop	4
ARCFT	135	Basic Airframe Maintenance	5
ARCFT	136	Basic Airframe Maintenance Shop	5
		Related Education Requirement [2]	3-4
		Total	**22–23**

Third Quarter

ARCFT	137	Airframe Structures	5
ARCFT	138	Airframe Structures Shop	5
ARCFT	139	Airframe Systems	5
ARCFT	140	Airframe Systems Shop	5
		Related Education Requirement [2]	3-4
		Total	**23–24**

Fourth Quarter

ARCFT	235	Advanced Airframe Systems	5
ARCFT	236	Advanced Airframe Systems Shop	5
ARCFT	237	Integrated Airframe Powerplant Maintenance	5
ARCFT	238	Integrated Airframe Powerplant Maintenance Shop	5
		Related Education Requirement [2]	3
		Total	**23**

Fifth Quarter

ARCFT	245	Aircraft Engines I	5
ARCFT	246	Aircraft Engines Shop I	5
ARCFT	247	Aircraft Engines II	5
ARCFT	248	Aircraft Engines Shop II	5
		Total	**20**

Sixth Quarter

ARCFT	255	Powerplant Systems and Components I	5
ARCFT	256	Powerplant Systems and Components I Shop	5
ARCFT	257	Powerplant Systems and Components II	5
ARCFT	258	Powerplant Systems and Components II Shop	5
		Total	**20**

Seventh Quarter

		Additional Credits to Satisfy FAA Requirements [3]	0-20
		Total	**0–20**

129-152 credits are required for the AAS

Additional Credits to Satisfy FAA Requirements

ARCFT	275	Theory and Review - Airframe or Powerplant [3]	1-10
ARCFT	276	Airframe or Powerplant Shop [3]	1-10

[1] This course may be substituted with any course from the department pre–approved substitution list or any related course or combination of courses approved by the instructional dean.

[2] This course may be chosen from a pre–approved departmental elective list or any related course or combination of courses approved by the instructional dean. A subtotal of 15 credits (a minimum of 3 in each category) in the related education areas of computation, written communication, and human relations/leadership is required for the AAS degree.

[3] Available for students who have not accumulated 1900 hours or satisfied other FAA requirements.

Certificate

Airframe Maintenance Certificate

This two–quarter certificate provides students with both theory and practical lab application on advanced aircraft construction, rigging and repair, aircraft operation systems, aircraft warning systems, and advanced aircraft electrical systems. This certificate in conjunction with the General Aircraft Maintenance Certificate would allow a student to be eligible to apply for a Federal Aviation Administration Maintenance Airframe License. Completion of the General Aircraft Maintenance Certificate is required before Airframe and/or Powerplant Certificate programs are taken. FAA requires 750 hours of attendance.

First Quarter

ARCFT	137	Airframe Structures	5
ARCFT	138	Airframe Structures Shop	5
ARCFT	139	Airframe Systems	5
ARCFT	140	Airframe Systems Shop	5
		Total	**20**

Second Quarter

ARCFT	235	Advanced Airframe Systems	5
ARCFT	236	Advanced Airframe Systems Shop	5
ARCFT	237	Integrated Airframe Powerplant Maintenance	5
ARCFT	238	Integrated Airframe Powerplant Maintenance Shop	5
		Total	**20**

40 credits are required for the Certificate

General Aircraft Maintenance Certificate

This two–quarter certificate provides students with both theory and practical lab applications in aviation physics and aerodynamics, aircraft weight and balance, aircraft ground handling, basic aircraft electrical circuits, aircraft inspection techniques, aircraft materials and construction, and Federal Aviation Administration regulations and maintenance entries. Completion of this certificate is required before Airframe and/or Powerplant Certificate programs are taken. FAA requires 400 hours of attendance.

MATH	100	Vocational Technical Mathematics [1]	3
		Total	**3**

First Quarter

ARCFT	115	Introduction to General Aircraft Maintenance	5
ARCFT	116	Introduction to General Aircraft Maintenance Shop	4
ARCFT	117	General Aircraft Maintenance	5
ARCFT	118	General Aircraft Maintenance Shop	4
		Total	**18**

Second Quarter

ARCFT	119	Advanced General Aircraft Maintenance	5
ARCFT	120	Advanced General Aircraft Maintenance Shop	4
ARCFT	135	Basic Airframe Maintenance	5
ARCFT	136	Basic Airframe Maintenance Shop	5
		Total	**19**

40 credits are required for the Certificate

[1] Required by FAA.

Powerplant Maintenance Certificate

This two–quarter certificate provides students with both theory and practical lab application in powerplant theory and construction both for reciprocating and turbine engines, and theory and repair of powerplant accessories. This certificate in conjunction with the General Aircraft Maintenance Certificate allows students to be eligible to apply for a Federal Aviation Administration Maintenance Powerplant License. Completion of the General Aircraft Maintenance Certificate is required before Airframe and/or Powerplant Certificate programs are taken. FAA requires 750 hours of attendance.

First Quarter

ARCFT	245	Aircraft Engines I	5
ARCFT	246	Aircraft Engines Shop I	5
ARCFT	247	Aircraft Engines II	5
ARCFT	248	Aircraft Engines Shop II	5
		Total	**20**

Second Quarter

ARCFT	255	Powerplant Systems and Components I	5
ARCFT	256	Powerplant Systems and Components I Shop	5
ARCFT	257	Powerplant Systems and Components II	5
ARCFT	258	Powerplant Systems and Components II Shop	5
		Total	**20**

40 credits are required for the Certificate

BAKING: PROFESSIONAL PASTRIES AND SPECIALTY CAKES
Certificate: SCC

This program prepares students for employment in independent, specialty bakeries and professional cake decorating environments. The certificate provides practical and theoretical training in personal hygiene in the baking industry, baking machinery usage, and production training in the baking of artisan breads and pastries. Students learn decorating, including proper piping procedures, tube usage, flower creation and decoration, color mixing and design principles.

Students must complete all courses with a 2.0 grade or better before advancing to subsequent quarters.

Certificate

First Quarter

BAK	101	Introduction to Baking and Pastries	1
BAK	110	Artisan Breads	5
BAK	111	Pastries	7
HM	112	Hospitality Mathematics [1]	3
		Total	**16**

Second Quarter

BAK	120	Special Occasion Cakes	2
BAK	121	Tortes and Gateau	2.5
BAK	130	Sculptured Cakes	2.5
BAK	131	Rolled Fondant	2.5
BAK	248	Wedding Cakes	2.5
HM	115	Food Sanitation	3
		Total	**15**

Third Quarter

APLED	121	Applied Written Communication [1]	4
APLED	123	Leadership Skills for Business and Industry [1]	3
BAK	288	Cooperative Education Work Experience (No Seminar) [2]	7
		Total	**14**

45 credits are required for the Certificate

[1] This course may be substituted with any course or combination of courses approved by the instructional dean.
[2] BAK 288 may be substituted with BAK 266 and 267 for 7 credits.

BIOLOGICAL SCIENCE PRE-MAJOR
AA–DTA, Associate in Biology DTA/MRP: SCC/SFCC

The Life Science Department offers courses in the fields of environmental biology, general biology, anatomy and physiology, nutrition, microbiology, botany and zoology. These courses allow students to investigate the scientific world either as a major area of study, part of the liberal arts curriculum or just to satisfy a curiosity.

Students in Biology can specialize in a wide array of areas such as Science Education, Zoology, Botany, Wildlife, Forestry, Fisheries, Ecology, Environment Science, Microbiology, and Biotechnology. Positions can be found in a variety of areas such as public and private educational institutions, private companies, and local, state, and federal government agencies. Entry level positions are very competitive, so student should consider graduate degrees.

AA–DTA

	Suggested Courses to Consider [1]	90
	Total	**90**

90 credits are required for the AA–DTA

Associate in Biology DTA/MRP

	Suggested Courses to Consider [1]	90
	Total	**90**

90 credits are required for the Associate in Biology DTA/MRP

[1] Consult a counselor or academic adviser for recommended courses specific to student's choice of transfer institution.

BIOMEDICAL EQUIPMENT TECHNICIAN
AAS: SCC

This program is designed to prepare students for employment in the specialized field of biomedical electronics in a hospital or in the medical electronics industry.

The curriculum has been planned to give comprehensive training in circuit analysis, laboratory techniques and the use of modern test equipment. A balanced study of peripheral subjects

that make the biomedical equipment technician unique also is included. These subjects include fundamentals of physics, chemistry, physiology, medical terminology, hospital ethics and hospital safety. The curriculum provides special lectures and laboratories in repair, and preventive maintenance of medical electronic equipment.

Graduates are prepared for employment as entry–level biomedical equipment technicians. To qualify for graduation, the student must have successfully completed five quarters of basic electronics including the additional required courses (i.e., chemistry and physics) and the six and seventh quarter biomedical sequence. Entrance to each quarter of basics is contingent upon satisfactory completion of the previous quarter. Students may enroll fall and winter quarters only. The clinical practicum is available during summer quarter only.

The goal of the program is to provide the health care field with biomedical equipment technicians who have a thorough understanding of electronic fundamentals; a practical ability to design, construct and troubleshoot electronic circuits; and knowledge about the theory of operation, physiological principles, and the safe and practical applications of biomedical equipment.

Prerequisites: appropriate ASSET or COMPASS scores in math, reading and writing (or alternative courses) must be met before admission into the program is granted. Written permission of the department chair or the technical division dean may supersede requirements.

To qualify for this degree, the student must successfully complete specific core electronics courses, as well as the biomedical classes during the sixth and seventh quarter of study. The seventh quarter of study includes a Clinical Experience at a medical facility. Since there are a limited number of Clinical sites in the Spokane area, students must be willing to go out of town to an available clinical site. The student must also successfully complete specific related classes including medical terminology, chemistry and physics. Successful completion will be determined by meeting the following criteria:

- A student must achieve an overall grade point average of 2.75 in all of the required electronics classes, biomedical electronics classes, and required specific related classes.
- A student must pass each of the electronics classes during the first three quarters of the program with a minimum grade of 1.7
- A student must pass each of the electronics classes during the fourth through seventh quarters with a minimum grade of 2.0
- A student must pass each required related course with a minimum grade of 2.0

Note: upon review, the department chairperson and/or Technical Education Dean may waive any or all of the previous criteria when extenuating circumstances arise.

AAS

First Quarter

ELECT	110	Computer Fundamentals for Electronics	2
ELECT	111	DC Circuits	7
ELECT	112	DC Circuit Lab	5
ELECT	113	DC/AC Circuit Math	5
		Total	**19**

Second Quarter

APLED	121	Applied Written Communication [1]	4
ELECT	121	AC Circuits	9
ELECT	122	AC Circuit Lab	5
ELECT	123	Advanced DC/AC Circuit Math	5
		Total	**23**

Third Quarter

ELECT	136	Solid State Devices/Circuits	5
ELECT	137	Solid State Devices/Circuits Lab	4
ELECT	138	Linear Devices/Circuits	5
ELECT	139	Linear Devices/Circuits Lab	4
PHYS	100	Introductory Physics [1]	5
		Total	**23**

Fourth Quarter

CHEM&	121	Intro to Chemistry: w/Lab [1]	5
ELECT	211	Digital Concepts	5
ELECT	212	Digital Concepts Lab	4
ELECT	213	Basic Computer Systems	5
ELECT	214	Basic Computer Systems Lab	4
		Total	**23**

Fifth Quarter

APLED	125	Employment Preparation [2]	3
ELECT	221	Communication Fundamentals	5
ELECT	222	Communication Fundamentals Lab	4
ELECT	223	Advanced Computer Systems	5
ELECT	224	Advanced Computer Systems Lab	4
		Total	**21**

Sixth Quarter

BIOEQ	199	Medical Terminology for Biomedical Equipment Technology [3]	2
BIOEQ	242	Physiology for Biomedical Equipment Technology	3
BIOEQ	251	Biomedical Instrumentation Patient Monitoring and Clinical	10
BIOEQ	252	Biomedical Instrumentation Laboratory	6
		Total	**21**

Seventh Quarter

BIOEQ	271	Biomedical Equipment Technology Clinical Rotation	10
BIOEQ	272	Biomedical Seminar	4
		Total	**14**

144 credits are required for the AAS

[1] It is recommended that students starting fall quarter should take APLED 121, CHEM& 121 and PHYS 100 during summer quarter to lighten their credit load for the third and fourth quarters. APLED 121 may be substituted by any course or combination of courses approved by the instructional dean.
[2] This course may be substituted by any course or combination of courses approved by the instructional dean.
[3] This course is offered spring quarter only.

BUSINESS ADMINISTRATION PRE-MAJOR AA–DTA, Associate in Business DTA/MRP: SCC/SFCC

More people earn their living in business than in any other field of endeavor. Regardless of their basic training—whether it be in design, social services, health fields, the arts or a vocational area—most persons seeking employment turn to private business. The profit or loss within a company can depend on good business "know–how." Even those who do not earn their living through business enterprise directly (such as lawyer, small business owner and government employee) usually find it necessary to know something about business operations. Hence, the importance of business administration can hardly be overemphasized.

AA–DTA

		Suggested Courses to Consider [1]	90
		Total	**90**

90 credits are required for the AA–DTA

Associate in Business DTA/MRP

	Suggested Courses to Consider [1]	90
	Total	**90**

90 credits are required for the Associate in Business DTA/MRP

[1] Consult a counselor or academic adviser for recommended courses specific to student's choice of transfer institution.

BUSINESS AND SOFTWARE APPLICATIONS Certificate: SFCC

The Business and Software Applications Certificate–a three–quarter program of study–helps students develop basic business and communication skills required in a business environment. In addition, students learn computer applications and human relations skills. This certificate is intended to provide students with the essential skills and knowledge required for entry–level positions in business.

Certificate

First Quarter

BT	101	Keyboarding	5
BT	107	Business Communications [2]	3
BUS&	101	Intro to Business	5
BUS	122	Practical Business Math [1]	3
		Total	**16**

Second Quarter

ACCT	103	Fundamental Bookkeeping Procedures [3]	3
BT	108	Business Communications [2]	3
CAPPS	151	Excel I	2
CAPPS	171	PowerPoint I	2
		Human Relations Elective	3-5
		Total	**13–15**

Third Quarter

BT	272	Business Correspondence	5
CAPPS	152	Excel II	2
CAPPS	161	Access I	2
MMGT	125	Social Media Marketing	5
		Computer Elective	2
		Total	**16**

45-47 credits are required for the Certificate

Computer Elective

BT	172	Publisher	2
CAPPS	142	Word II	2
CAPPS	162	Access II	2
CAPPS	172	PowerPoint II	2
CAPPS	180	Outlook	2
IS	120	Business Computer Use	3
IS	160	Internet Fundamentals	1
IS	210	Internet Programming I	1-5

Human Relations Elective

BUS	280	Human Relations in Business	5
MMGT	223	Customer Service	3

[1] BUS 123 may be substituted for BUS 122.
[2] ENGL& 101 may be substituted for BT 107/108.
[3] ACCT& 201 may be substituted for ACCT 103.

BUSINESS MANAGEMENT AAS: SFCC

The challenge of management! It takes a special kind of person with a special knack to be a good business manager. Over 60 percent of the workforce in Spokane is employed in a distributive occupation. This creates a big demand for persons with training as middle managers and junior executives. The Business Management program at SFCC is designed to give an individual on–the–job work experience while learning the basic principles of business management. Students are given credit for approved work experience.

Courses in the program include management, marketing, professional sales, principles of leadership, social media marketing and human relations. There are seventy five credits of required core courses and students are required to complete an additional fifteen credits from one of the six areas of emphasis in the Business Management degree: Credit and Financial Management, Fashion Merchandising, Marketing, Retail Management, Small Business Management, and Transportation and Logistics. Credits may vary by emphasis, but a minimum of fifteen in one emphasis is required. Select courses from the area of emphasis that best meets your needs. Only one AAS Degree in Business Management will be awarded.

The Business Management Department also offers four certificates which can be found under Credit and Financial Management, Management, Retail Management and Transportation and Logistics.

AAS

First Quarter

BT	107	Business Communications	3
BUS&	101	Intro to Business	5
BUS	280	Human Relations in Business	5
		Total	**13**

Second Quarter

BT	108	Business Communications	3
MMGT	125	Social Media Marketing	5
MMGT	223	Customer Service	3
MMGT	231	Human Resource Management	5
		Total	**16**

Third Quarter

BT	272	Business Correspondence	5
BUS	103	Basic Business Math and Electronic Calculators [1]	5
MMGT	101	Principles of Management	5

Fourth Quarter

ACCT&	201	Prin of Accounting I	5
CMST&	101	Introduction to Communication	5
		Area of Emphasis [2]	5
		Total	**15**

Fifth Quarter

BUS	105	Principles of Leadership	3
BUS&	201	Business Law	5
CRMGT	140	Financial Statement Analysis	3
		Area of Emphasis [2]	5
		Total	**16**

Sixth Quarter

ECON	100	Fundamentals of Economics [3]	5
MMGT	211	Marketing	5
		Area of Emphasis [2]	5
		Total	**15**

75 credits are required for the AAS

Area of Emphasis: Credit and Financial Management

BUS	100	Money Management	3
CRMGT	150	Introduction to Investments	2
CRMGT	190	Business Credit Principles	3
CRMGT	220	Credit Law/Collection Techniques	3

Area of Emphasis: Fashion Merchandising

FMDSE	111	Fashion Merchandising Seminar	2
FMDSE	155	Fashion Trends	3
FMDSE	201	Fashion Fabrics	3
FMDSE	224	Principles of Retail Promotion	5
MMGT	220	Professional Sales	3

Area of Emphasis: Marketing

BUS	140	International Marketing	3
MMGT	218	Fundamentals of Advertising	5
MMGT	220	Professional Sales	3
SBM	105	Targeting Your Market	2

Area of Emphasis: Retail Management

FMDSE	150	Principles of Retail Merchandising	5
MMGT	218	Fundamentals of Advertising	5
MMGT	252	Principles of Purchasing	3
MMGT	253	Inventory Management	3

Area of Emphasis: Small Business Management

ACCT	141	QuickBooks	3
ACCT	219	Payroll and Business Taxes	5
ACCT	219	Payroll and Business Taxes	5
SBM	101	How to Start a Small Business	5
SBM	105	Targeting Your Market	2

Area of Emphasis: Transportation and Logistics

MMGT	251	Transportation Systems	3
MMGT	252	Principles of Purchasing	3
MMGT	253	Inventory Management	3
MMGT	254	Logistics and Supply Chain Management	3
MMGT	255	Warehouse and Distribution Management	3

[1] May substitute BUS 217.
[2] Students are required to select one Area of Emphasis to complete the Business Management AAS Degree. Credits may vary by emphasis. At least 15 credits are required.
[3] ECON 100 may be substituted with ECON& 202.

BUSINESS OCCUPATIONS
Certificate: SCC

The Business Occupations Certificate is designed to provide a balanced survey of business knowledge and skills that are core to the General Business Associate in Applied Science degree program and most other business AAS degree programs. All students graduating from this program must have a minimum grade of 2.0 on each of the accounting, management, economics and general business required courses. Students must also have a 2.0 cumulative minimum grade point average on all required courses in the program.

Certificate

ACCT	151	College Accounting I [1]	5
BUS&	101	Intro to Business	5
BUS	103	Basic Business Math and Electronic Calculators	5
BUS	280	Human Relations in Business	5
CIS	110	Introduction to Computer Applications	5
CMST&	101	Introduction to Communication	5
ECON	100	Fundamentals of Economics [2]	5
ENGL&	101	English Composition I [3]	5
MMGT	101	Principles of Management	5
		Total	**45**

45 credits are required for the Certificate

Group A–Written Communication Elective

BT	109	Business Communications [4]	5
BT	272	Business Correspondence [4]	5
ENGL&	102	Composition II	5
ENGL&	235	Technical Writing	5

[1] ACCT 151 may be substituted with ACCT& 201.
[2] ECON 100 may be substituted with a higher level ECON course.
[3] ENGL& 101 may be substituted with a course selected from the Group A–Written Communication Elective totaling 5 credits.
[4] BT 109 is a prerequisite to BT 272.

BUSINESS OCCUPATIONS
Certificate: SFCC

The Business Occupations Certificate is designed to provide a balanced survey of business knowledge and skills that are core to the General Business Associate in Applied Science degree program and most other business AAS degree programs.

Certificate

ACCT&	201	Prin of Accounting I [1]	5
BUS&	101	Intro to Business	5
BUS	280	Human Relations in Business [2]	5
		Business Electives [3]	16-17
		Computer Electives [4]	3-10
		Math Electives	3-5
		Speech Communication Electives [5]	5
		Written Communication Electives [5]	5-6
		Total	**47–58**

47-58 credits are required for the Certificate

Computer Electives

BT	101	Keyboarding [4]	5
CIS	110	Introduction to Computer Applications	5
CS	101	Computer Literacy	5
IS	120	Business Computer Use	3

Math Electives

BUS	102	Math Skills for Business	3
BUS	103	Basic Business Math and Electronic Calculators	5

Speech Communication Electives

CMST&	101	Introduction to Communication	5
CMST&	210	Interpersonal Communication	5

Written Communication Electives

BT	107	Business Communications	3
BT	108	Business Communications	3
BT	272	Business Correspondence	5
ENGL&	101	English Composition I	5
ENGL&	102	Composition II	5

[1] ACCT& 201 may be substituted with ACCT 151.
[2] BUS 280 may be substituted with MMGT 101.
[3] See department for list of approved business electives.
[4] BT 101 or proven proficiency required. Students with keyboarding experience may waive this requirement by obtaining a waiver from the business technology department chair.
[5] Additional courses in written communication may be substituted for the speech communication list.

BUSINESS, GENERAL
AAS: SCC

The objective of this program is to permit the student maximum flexibility in designing a two–year program of study in business. The student may specialize in a particular area of business such as marketing, management, or accounting; or select courses that provide a general exposure to several areas of business.

The General Business curriculum serves the student who is uncertain about transferring to a four–year institution or who wants a curriculum that maximizes transferability and at the same time permits emphasis on business courses to a greater extent than is possible when taking the general two–year transfer program.

Such a curriculum does not permit a student to complete all the courses normally required by a four–year institution in the freshman–sophomore years; however, it is possible for the student to undertake a curriculum where many of these requirements are met and where all other completed courses taken could be accepted for elective credit by the four–year institution. All students graduating from this program must have a minimum grade of 2.0 on each of the Management, Accounting, Economic, and General Business required courses. Students must also have a 2.0 cumulative minimum grade point average on all required courses in the program.

AAS
Option 1

ACCT	151	College Accounting I [1]	5
BUS&	101	Intro to Business	5
BUS	104	Business Mathematics [2]	5
BUS	280	Human Relations in Business	5
CATT	120	Microsoft Word I	2.5
CATT	138	Microsoft Excel I	2.5
CMST&	101	Introduction to Communication	5
ECON	100	Fundamentals of Economics [3]	5
ENGL&	101	English Composition I	5
MMGT	100	Supervised Volunteer Experience	1
MMGT	101	Principles of Management	5
MMGT	211	Marketing	5
		Group A,B,C,D or E Elective	11
		Group A-Written Communication Elective	5
		Group B-Marketing & Management Elective	15
		Group C-Computing Elective	5
		Group D-Quantitative Analysis Elective	5
		Total	**92**

92 credits are required for the AAS

Group A–Written Communication Elective

BT	109	Business Communications	5
BT	272	Business Correspondence [4]	5
ENGL&	102	Composition II	5
ENGL&	235	Technical Writing	5

Group B–Marketing & Management Elective

BUS	120	International Business	5
BUS	140	International Marketing	3
BUS&	201	Business Law	5
BUS	204	Introduction to Law	5
BUS	284	Special Business Topics	1-5
BUS	285	Special Business Topics	1-5
BUS	286	Special Business Topics	1-5
CATT	241	Microsoft Project	2.5
CATT	242	Advanced Microsoft Project [5]	2.5
MMGT	125	Social Media Marketing	5
MMGT	205	Small Business Planning	5
MMGT	212	Retailing	5
MMGT	218	Fundamentals of Advertising	5
MMGT	223	Customer Service	3
MMGT	231	Human Resource Management	5
MMGT	232	Project Leadership	5
MMGT	243	Fundamentals of Project Management	5
MMGT	288	Cooperative Education Work Experience (No Seminar)	1-5

Group C–Computing Elective

CATT	102	Introduction to Outlook	2.5
CATT	121	Microsoft Word II	2.5
CATT	128	Desktop Publishing [6]	5
CATT	139	Microsoft Excel II	2.5
CATT	190	Introduction to PowerPoint	2.5
CIS	110	Introduction to Computer Applications	5
CIS	112	Web Graphics with Photoshop	5

Group D–Quantitative Analysis Elective

ACCT	141	QuickBooks	5
ACCT	142	Advanced QuickBooks [7]	5
ACCT	152	College Accounting II	5
ACCT	161	Payroll Procedures	4
ACCT	162	Business Tax Accounting [8]	1
ACCT&	201	Prin of Accounting I	5
ACCT&	202	Prin of Accounting II [9]	5
ACCT&	203	Prin of Accounting III [9]	5
ACCT	204	Accounting Integration	5
ACCT	212	Accounting Applications and Analysis	5
BUS	217	Business Statistics [10]	5
ECON&	201	Micro Economics	5
ECON&	202	Macro Economics	5

Group E–Business Related Elective

BUS	100	Money Management	3
BUS	103	Basic Business Math and Electronic Calculators	5
CMST&	210	Interpersonal Communication	5
CMST	227	Intercultural Communication	5
CMST	287	Business and Professional Communication	5
MMGT	100	Supervised Volunteer Experience	2
MMGT	181	Leadership Training-DEC	1
MMGT	182	Leadership Training-DEC	1
MMGT	183	Leadership Training-DEC	1
MMGT	191	Leadership Training-DEC	1
MMGT	192	Leadership Training-DEC	1
MMGT	193	Leadership Training-DEC	1
PSYC&	100	General Psychology	5
SOC&	101	Intro to Sociology	5
SPAN&	121	Spanish I	5

[1] ACCT 151 may be substituted with ACCT& 201.
[2] BUS 103 or proficiency test is required.
[3] ECON 100 may be substituted with a higher level ECON course.
[4] BT 109 is a prerequisite to BT 272.
[5] Previous or concurrent enrollment in CATT 241 is required.
[6] CIS 110 is a prerequisite of CATT 128.
[7] ACCT 141 or permission of instructor.
[8] ACCT 151 or permission of instructor and concurrent enrollment in ACCT 161.
[9] A grade of 2.0 or better in ACCT& 201 or permission of instructor.
[10] MATH 099 with a 2.0 or better or appropriate placement scores.

Option 2

ACCT	151	College Accounting I [1]	5
BUS&	101	Intro to Business	5
BUS	104	Business Mathematics [2]	5
BUS	280	Human Relations in Business	5
CATT	120	Microsoft Word I	2.5
CATT	138	Microsoft Excel I	2.5
CMST&	101	Introduction to Communication	5
ECON	100	Fundamentals of Economics [3]	5
ENGL&	101	English Composition I	5
IBE	201	Integrated Business and Entrepreneurship Principles I	10
IBE	202	Integrated Business and Entrepreneurship Principles II	10
IBE	203	Integrated Business and Entrepreneurship Principles III	10
MMGT	100	Supervised Volunteer Experience	1
MMGT	101	Principles of Management	5

MMGT	211	Marketing	5
		Group A,B,C,D or E Elective	6
		Group A-Written Communication Elective	5
		Total	**92**

92 credits are required for the AAS

Group A–Written Communication Elective

BT	109	Business Communications	5
BT	272	Business Correspondence [4]	5
ENGL&	102	Composition II	5
ENGL&	235	Technical Writing	5

Group B–Marketing & Management Elective

BUS	120	International Business	5
BUS	140	International Marketing	3
BUS&	201	Business Law	5
BUS	204	Introduction to Law	5
BUS	284	Special Business Topics	1-5
BUS	285	Special Business Topics	1-5
BUS	286	Special Business Topics	1-5
CATT	241	Microsoft Project	2.5
CATT	242	Advanced Microsoft Project [5]	2.5
MMGT	125	Social Media Marketing	5
MMGT	205	Small Business Planning	5
MMGT	212	Retailing	5
MMGT	218	Fundamentals of Advertising	5
MMGT	223	Customer Service	3
MMGT	231	Human Resource Management	5
MMGT	232	Project Leadership	5
MMGT	243	Fundamentals of Project Management	5
MMGT	288	Cooperative Education Work Experience (No Seminar)	1-5

Group C–Computing Elective

CATT	102	Introduction to Outlook	2.5
CATT	121	Microsoft Word II	2.5
CATT	128	Desktop Publishing [6]	5
CATT	139	Microsoft Excel II	2.5
CATT	190	Introduction to PowerPoint	2.5
CIS	110	Introduction to Computer Applications	5
CIS	112	Web Graphics with Photoshop	5

Group D–Quantitative Analysis Elective

ACCT	141	QuickBooks	5
ACCT	142	Advanced QuickBooks [7]	5
ACCT	152	College Accounting II	5
ACCT	161	Payroll Procedures	4
ACCT	162	Business Tax Accounting [8]	1
ACCT&	201	Prin of Accounting I	5
ACCT&	202	Prin of Accounting II [9]	5
ACCT&	203	Prin of Accounting III [9]	5
ACCT	204	Accounting Integration	5
ACCT	212	Accounting Applications and Analysis	5
BUS	217	Business Statistics [10]	5
ECON&	201	Micro Economics	5
ECON&	202	Macro Economics	5

Group E–Business Related Elective

BUS	100	Money Management	3
BUS	103	Basic Business Math and Electronic Calculators	5
CMST&	210	Interpersonal Communication	5
CMST	227	Intercultural Communication	5
CMST	287	Business and Professional Communication	5
MMGT	100	Supervised Volunteer Experience	2
MMGT	181	Leadership Training-DEC	1
MMGT	182	Leadership Training-DEC	1
MMGT	183	Leadership Training-DEC	1
MMGT	191	Leadership Training-DEC	1
MMGT	192	Leadership Training-DEC	1
MMGT	193	Leadership Training-DEC	1
PSYC&	100	General Psychology	5
SOC&	101	Intro to Sociology	5
SPAN&	121	Spanish I	5

[1] ACCT 151 may be substituted with ACCT& 201.
[2] BUS 103 or proficiency test is required.
[3] ECON 100 may be substituted with a higher level ECON course.
[4] BT 109 is a prerequisite to BT 272.
[5] Previous or concurrent enrollment in CATT 241 is required.
[6] CIS 110 is a prerequisite of CATT 128.
[7] ACCT 141 or permission of instructor.
[8] ACCT 151 or permission of instructor and concurrent enrollment in ACCT 161.
[9] A grade of 2.0 or better in ACCT& 201 or permission of instructor.
[10] MATH 099 with a 2.0 or better or appropriate placement scores.

BUSINESS, GENERAL
AAS: SFCC

The objective of this program is to permit the student maximum flexibility in designing a two–year program of study in business. The student may specialize in a particular area of business such as distribution, sales, or accounting; or select courses that provide a general exposure to several areas of business.

The General Business curriculum serves the student who is uncertain about transferring to a four–year institution or who wants a curriculum that maximizes transferability and at the same time permits emphasis on business courses to a greater extent than is possible when taking the general two–year transfer program.

Such a curriculum does not permit a student to complete all the courses normally required by a four–year institution in the freshman–sophomore years; however, it is possible for the student to undertake a curriculum where many of these requirements are met and where all other completed courses taken could be accepted for elective credit by the four–year institution.

AAS

First Quarter

BT	100	Beginning Keyboarding [1]	1
BT	107	Business Communications [2]	3
BUS&	101	Intro to Business	5
		Business Elective [3]	3
		General Elective [4]	5
		Total	**17**

Second Quarter

BT	108	Business Communications [2]	3
BUS	103	Basic Business Math and Electronic Calculators	5
BUS	108	eBusiness	2
		General Elective [4]	5
		Total	**15**

Third Quarter

BT	272	Business Correspondence	5
CMST&	101	Introduction to Communication	5
		Business Elective [3]	2
		Computer Software Elective	1
		General Elective [4]	2
		Total	**15**

Fourth Quarter

ACCT&	201	Prin of Accounting I	5
ECON&	202	Macro Economics	5
		Business Elective [3]	5
		Total	**15**

Fifth Quarter

ACCT	121	Payroll Procedures	3
ACCT	122	Business Tax Accounting	1
BUS&	201	Business Law	5
		Business Elective [3]	5
		Total	**14**

Sixth Quarter

BUS	280	Human Relations in Business	5
		Business Elective [3]	6
		General Elective [4]	3
		Total	**14**

90 credits are required for the AAS

Computer Software Elective

CAPPS	102	Introduction to Office	1
CAPPS	141	Word I	2
CAPPS	151	Excel I	2
CAPPS	161	Access I	2
CAPPS	171	PowerPoint I	2

[1] BT 100 may be substituted with BT 101.
[2] ENGL& 101 may be substituted for BT 107 and 108 depending on the student's educational objectives.
[3] All general business students must take a minimum of 19 credits of business electives.
[4] General electives must come from any discipline OTHER than business.

CAD COMPUTER AIDED DESIGN AND DRAFTING AAS, Certificate: SCC

The CAD Computer Aided Design and Drafting program prepares students with the skills necessary for an engineering technician career using both CAD drafting and 3–D Solid Modeling techniques. The course of study prepares students to work in a wide range of engineering disciplines, including engineering teams for large and small manufacturing firms, consultant engineering firms, testing, and research companies to gain employment as Computer Aided Drafters and Engineering Designers.

Students not only learn to draft using CAD and solid modeling techniques, but also get “hands–on ”practical experience in rapid prototyping, engineering design projects, and by learning fabrication processes used in industry. Coursework includes a balance of basic skills in math and communications, as well as practical application of relevant computer assisted drafting skills in several engineering disciplines, including: mechanical, civil and structural engineering; architectural drafting; electrical and fluid power schematics; and fabrication/piping drafting.

AAS
First Quarter

APLED	112	Applied Mathematics [1]	5
APLED	121	Applied Written Communication [2]	4
CAD	105	Basic Blueprint Reading	3
CAD	114	Engineering Graphics 1	4
MET	101	Introduction to Engineering [3]	2
		Total	**18**

Second Quarter

APLED	123	Leadership Skills for Business and Industry [2]	3
CAD	124	Engineering Graphics 2	5
CAD	129	Computer Aided Drafting	5
MET	123	Applied Technical Mathematics [4]	5
		Total	**18**

Third Quarter

CAD	131	Dimensioning and Tolerancing	3
CAD	132	Engineering Graphics 3	5
CAD	135	Schematics	3
MET	127	Manufacturing Processes	3
MET	133	Introductory Applied Physics	3
		Total	**17**

Fourth Quarter

CAD	241	CAD Solid Modeling	5
CAD	259	Architectural CAD Applications [5]	3
CAD	268	Structural CAD Applications	4
MET	242	Mechanical Design Fundamentals	4
MET	247	Shop Practices	2
		Total	**18**

Fifth Quarter

APLED	125	Employment Preparation [2]	3
CAD	248	Mechanical CAD Applications	4
CAD	252	Advanced CAD	5
MET	255	Technical Applications I [6]	4
		Total	**16**

Sixth Quarter

CAD	260	Fabrication and Piping CAD Applications [7]	3
CAD	261	Project Design	4
CAD	269	Civil CAD Applications	4
MET	264	Technical Applications II [6]	4
		Total	**15**

102 credits are required for the AAS

Approved Electives

ARCHT	122	Basic Residential Drafting	5-7
CAD	258	Schematic CAD Applications	4
CAD	259	Architectural CAD Applications [8]	3
CAD	260	Fabrication and Piping CAD Applications [7]	3
CAD	268	Structural CAD Applications	4
CAD	269	Civil CAD Applications	4
CET	122	Surveying Theory	5
ELMT	243	Introduction to Programmable Controllers	4
MET	127	Manufacturing Processes	3
MET	250	Strength of Materials/Materials Science	5
MET	253	Materials Science	2

[1] This related education requirement may be met by any course or combination of courses approved by the department dean. This course may be substituted as approved by the CAD instructor or department dean with: CET 111 or MET 115.
[2] This related education requirement may be met by any course or combination of courses approved by the department dean.
[3] MET 101 may be substituted with CIS 105, 106 or 110.
[4] This course may be substituted as approved by the CAD instructor or department dean with: CET 121 or MATH 100.
[5] This course may be substituted with co–op credits MET 266 and 267 or MET 288. This course may be substituted as approved by the CAD instructor or department dean with ARCHT 122, CAD 258 (formerly MET 258).
[6] This course may be substituted with an approved elective or with co–op credits MET 266 and 267 or MET 288.
[7] This course may be substituted with co–op credits MET 266 and 267 or MET 288.
[8] This course may be substituted as approved by the CAD instructor or department dean with: CAD 258, 260, 268 or 269 (formerly MET 258,260,268 or 269).

Certificate
First Quarter

APLED	112	Applied Mathematics [1]	5
APLED	121	Applied Written Communication [2]	4
CAD	105	Basic Blueprint Reading	3
CAD	114	Engineering Graphics 1	4
MET	101	Introduction to Engineering [3]	2
		Total	**18**

Second Quarter

APLED	123	Leadership Skills for Business and Industry[2]	3
CAD	124	Engineering Graphics 2	5
CAD	129	Computer Aided Drafting	5
MET	123	Applied Technical Mathematics [4]	5
		Total	**18**

Third Quarter

CAD	131	Dimensioning and Tolerancing	3
CAD	132	Engineering Graphics 3	5
CAD	135	Schematics	3
		Approved Electives [5]	4
		Total	**15**

Fourth Quarter

APLED	125	Employment Preparation [2]	3
CAD	241	CAD Solid Modeling	5
CAD	248	Mechanical CAD Applications [7]	4
		Approved Electives [5]	4
		Total	**16**

67 credits are required for the Certificate

Approved Electives

ARCHT	122	Basic Residential Drafting	5-7
CAD	258	Schematic CAD Applications	4
CAD	259	Architectural CAD Applications [7]	3
CAD	260	Fabrication and Piping CAD Applications [6]	3
CAD	268	Structural CAD Applications	4
CAD	269	Civil CAD Applications	4
CET	122	Surveying Theory	5
ELMT	243	Introduction to Programmable Controllers	4
MET	127	Manufacturing Processes	3
MET	250	Strength of Materials/Materials Science	5
MET	253	Materials Science	2

[1] This related education requirement may be met by any course or combination of courses approved by the department dean. This course may be substituted as approved by the CAD instructor or department dean with: CET 111 or MET 115.
[2] This related education requirement may be met by any course or combination of courses approved by the department dean.
[3] MET 101 may be substituted with CIS 105, 106 or 110.
[4] This course may be substituted as approved by the CAD instructor or department dean with: CET 121 or MATH 100.
[5] This course may be substituted with an approved elective or with co–op credits MET 266 and 267 or MET 288.
[6] This course may be substituted with co–op credits MET 266 and 267 or MET 288.
[7] This course may be substituted as approved by the CAD instructor or department dean with: CAD 258, 260, 268 or 269 (formerly MET 258,260,268 or 269).

CARPENTRY AND CABINETRY
AAS, Certificate: SCC

Carpentry is a rewarding career ideally suited to the person who has an interest in and aptitude for working with tools and materials. The trade requires the development of manual skills: skills that involve both thinking and doing. Carpentry also requires a thorough knowledge of materials and methods used in construction work.

The carpenter belongs to the largest group of building trade workers. Job opportunities encompass everything from new residential or commercial construction to remodeling and alteration, maintenance, and building repair work.

First Aid/CPR is a condition of graduation and must be obtained by the third quarter.

AAS
First Quarter

CARP	113	Carpentry Math	5
CARP	114	Transit Layout and Design	4
CARP	115	Basic Construction Systems	7
MET	103	Introduction to Computers for Technology	3
		Total	**19**

Second Quarter

APLED	121	Applied Written Communication [1]	4
CARP	123	Cabinetry Math	3
CARP	124	Cabinet Layout and Design	5
CARP	125	Cabinet Construction	5
CARP	126	Cabinet Finishing	3
		Total	**20**

Third Quarter

CARP	133	Introduction to Estimating	3
CARP	134	Introduction to Trim and Exterior Finish	3
CARP	135	Practical Construction Applications	8
CARP	136	Residential Blueprint Reading	2
		Total	**16**

Fourth Quarter

APLED	123	Leadership Skills for Business and Industry[1]	3
CARP	243	Plan Reading and Material Estimation	7
CARP	244	Practical Framing Applications	9
		Total	**19**

Fifth Quarter

ARCHT	125	Residential Building Codes	2
CARP	251	Introduction to Construction Trades	2
CARP	253	Exterior Estimating	7
CARP	254	Exterior Application Methods	9
		Total	**20**

Sixth Quarter

CARP	263	Interior Estimating	7
CARP	264	Interior Application Methods	9
		Total	**16**

110 credits are required for the AAS

[1] This related education requirement may be met by any course or combination of courses approved by the instructional dean.

Certificate
Carpentry and Cabinetry
First Quarter

APLED	121	Applied Written Communication [1]	4
CARP	113	Carpentry Math	5
CARP	114	Transit Layout and Design	4
CARP	115	Basic Construction Systems	7
		Total	**20**

Second Quarter

APLED	123	Leadership Skills for Business and Industry [2]	3
CARP	123	Cabinetry Math	3
CARP	124	Cabinet Layout and Design	5
CARP	125	Cabinet Construction	5
CARP	126	Cabinet Finishing	3
		Total	**19**

Third Quarter

CARP	133	Introduction to Estimating	3
CARP	134	Introduction to Trim and Exterior Finish	3
CARP	135	Practical Construction Applications	8
CARP	136	Residential Blueprint Reading	2
		Total	**16**

55 credits are required for the Certificate

[1] This related education requirement may be met by any course or combination of courses approved by the instructional dean.
[2] Required only for those students completing the certificate program.

Advanced Cabinetry
This Cabinetry program is designed for students who wish to obtain advanced skills in cabinetry. The coursework provides both basic and advanced projects that require additional skills and techniques not offered in the basic program. Permission of the instructor is required for admission to the program.

First Quarter

CARP	123	Cabinetry Math	3
CARP	124	Cabinet Layout and Design	5
CARP	125	Cabinet Construction	5
CARP	126	Cabinet Finishing	3
		Total	**16**

Second Quarter

CARP	223	Advanced Cabinetry Math	3
CARP	224	Advanced Cabinet Layout and Design	5
CARP	225	Advanced Cabinet Construction	5
CARP	226	Advanced Cabinet Finishing	3
		Total	**16**

32 credits are required for the Certificate

CERTIFIED PROFESSIONAL SECRETARY
Credit by Nontraditional Means: SCC/SFCC

Administrative assistants today are rewarded for their efforts to develop a broad knowledge of their own field and the business world by being awarded the title Certified Professional Secretary (CPS). This title is earned by those who meet the qualifications established by the Institute for Certification, an organization sponsored by International Association of Administrative Professionals.

Students who complete a two–year post-secondary Administrative Assistant program in an accredited college such as SCC or SFCC may take the examination before they fulfill work experience requirements which are outlined as follows:

- Students who complete a two–year program in an accredited school and pass the CPS examination must complete three years of verified office experience.
- Students who complete a bachelor's or advanced degree program and pass the CPS examination must complete two years of verified administrative assistant experience.

Successful completion of the work experience requirements and the examination will permit candidates to receive the CPS certification.

Students who have successfully completed 15 to 30 quarter hours of credit at a college within Community Colleges of Spokane may be granted further credit of up to 60 quarter hours upon completing the requirements of the CPS examination.

Upon completion of the 15–credit–hour residency requirement, 30 credits may be granted. Upon completion of the 30–credit–hour residency requirement, 60 credits may apply toward the requirements for an associate in applied science or associate of arts degree at either SCC or SFCC. The designation as a Certified Professional Secretary may permit specific credit to be given, up to 60 credits for the following courses.

Credit by Nontraditional Means
Up to 60 credits may be awarded

ACCT&	201	Prin of Accounting I	5
ACCT&	202	Prin of Accounting II	5
BT	101	Keyboarding	5
BT	102	Document Processing	5
BT	103	Formatting	5
BT	107	Business Communications [2]	3
BT	108	Business Communications [2]	3
BT	165	Word Processing	5
BT	201	Information Processing	5
BT	231	Office Procedures	5
BT	233	Directed Office Practice	6
BT	240	Administrative Office Procedures	8
BT	255	Business Productivity Tools	3
BT	260	Administrative Office Management	5
BT	272	Business Correspondence	5
BUS&	101	Intro to Business	5
BUS	103	Basic Business Math and Electronic Calculators	5
BUS	104	Business Mathematics	5
BUS&	201	Business Law	5
CAPPS	141	Word I	2
CAPPS	142	Word II	2
CIS	110	Introduction to Computer Applications [3]	5
ECON&	201	Micro Economics	5
ECON&	202	Macro Economics	5
MMGT	231	Human Resource Management	5

[1] The designation as a certified professional secretary may permit specific credit to be given, up to 60 credits for the following courses. The request for granting of these credits by nontraditional means should be directed to the vice president of student services at SFCC.
[2] Credit may be awarded for BT 107 and 108 (6 credits), or BT 109 (5 credits).
[3] Credit may be awarded for CIS 101 or CIS 110. CIS courses offered at SCC only.

CHEMISTRY PRE-MAJOR
AA–DTA, AS–T 1: SCC/SFCC

Chemistry is the "central science" of a wide range of studies, exploring the structures and transformations of matter down to the molecular level. Since chemistry is foundational to all technology advances, Chemistry majors find employment in a variety of professions. Majoring in Chemistry also provides excellent background for graduate studies in pharmacy, environmental sciences, chemical engineering, biotechnology, nutrition, medicine, and dentistry, among others.

Recent employment surveys show that about two–thirds of chemists work in various industrial fields. These include, but are not limited to, development of pharmaceutical drugs, computer technology, petroleum processing, environmental toxicology, and forensic sciences. About one–fourth of the chemists teach and/or do research in academic institutions. Chemists also work in less technical fields, serving as managers, attorneys, journalists, etc., either in government agencies or the private sector.

AA–DTA

	Suggested Courses to Consider [1]	90
	Total	**90**

90 credits are required for the AA–DTA

AS–T 1

	Suggested Courses to Consider [1]	90
	Total	**90**

90 credits are required for the AS–T 1

[1] Consult a counselor or academic adviser for recommended courses specific to student's choice of transfer institution.

CHIROPRACTIC ASSISTANT
Certificate: SCC

The Chiropractic Assistant Certificate program prepares students for positions in the chiropractic office field as receptionists and chiropractic billing clerks with the ability to communicate with and answer questions from chiropractic patients about their care and the chiropractic philosophy.

Admission Requirements:

- Keyboarding skills: 40 wpm with six or fewer errors completed at the SCC testing center or enrollment in BT 101 or 102
- Current first aid/CPR card or successful completion of EMS 120 or equivalent
- Students with math ASSET scores below 30 or math COMPASS test scores below 20 must successfully complete BT 151 during the first quarter

A minimum passing grade of 2.0 in each course is required for the certificate.

Certificate

First Quarter

BT	105	Basic Grammar for Business II	5
HED	104	Medical Terminology and Anatomy	5
MSEC	108	Medical Office Computing	5
		Total	**15**

Second Quarter

ACCT	151	College Accounting I	5
BT	231	Office Procedures	5
HED	105	Medical Terminology and Anatomy	5
MSEC	123	Medical Office Coding	5
		Total	**20**

Third Quarter

BUS	103	Basic Business Math and Electronic Calculators [1]	5
MSEC	121	Medical Office Reception	5
MSEC	124	Medical Office Insurance Billing	5
MSEC	125	Medical Office Bookkeeping	5
		Total	**20**

Fourth Quarter

BT	160	Job Preparation Techniques	3
MSEC	120	Human Relations/Communications for Medical Office Personnel	5
MSEC	284	Medical Internship Seminar	1
MSEC	289	Chiropractic Internship	3
		Total	**12**

67 credits are required for the Certificate

[1] BUS 103 may be substituted with BT 128.

CHIROPRACTIC PRE-MAJOR
AA–DTA, Associate in Biology DTA/MRP: SCC/SFCC

Chiropractic is a system of treatment based on the principle that a person's health is determined largely by the nervous system, and that interference with this system impairs normal functions and lowers resistance to disease. Chiropractors treat their patients primarily by manual manipulation of parts of the body, especially the spinal column.

AA–DTA

	Suggested Courses to Consider [1]	90
	Total	**90**

90 credits are required for the AA–DTA

Associate in Biology DTA/MRP

	Suggested Courses to Consider [1]	90
	Total	**90**

90 credits are required for the Associate in Biology DTA/MRP

[1] Consult a counselor or academic adviser for recommended courses specific to student's choice of transfer institution.

CIVIL ENGINEERING TECHNOLOGY
AAS: SCC

The Civil Engineering Technology program is designed to provide a comprehensive, well balanced study in applied and related science concerning the engineering and construction industry. This course prepares students in the basic fundamentals of construction techniques, materials testing, surveying, estimating and quantity take–off, plan reading, drafting (manual and computer aided), office and business procedures, planning of construction work, and computer–aided design.

AAS

First Quarter

CET	111	Technical Math	8
CET	112	Plan Reading	4
CET	113	Drafting	4
CIS	105	Computer Fundamentals for Vocations I [1]	3
		Total	**19**

Second Quarter

CET	121	Applied Technical Math	7
CET	122	Surveying Theory	5
CET	123	Introduction to Civil Computer Aided Design	6
GEOL	116	Environmental Geology	5
		Total	**23**

Third Quarter

CET	133	Field Surveying	8
CET	136	Statics	6
CET	161	Land Surveying	5
		Total	**19**

Fourth Quarter

CET	242	Advanced Surveying	6
CET	243	Advanced Civil Computer Aided Design	6
CET	253	Strength of Materials	5
ENGL&	101	English Composition I [1]	5
		Total	**22**

Fifth Quarter

APLED	125	Employment Preparation [1]	3
CET	252	Hydraulics I	6
CET	254	Structures	5
CET	257	Construction Materials I	6
		Total	**20**

Sixth Quarter

CET	230	Construction Process I	3
CET	232	Construction Process II [2]	2
CET	256	Hydraulics II	3
CET	258	Construction Materials II [2]	3
CET	261	Concrete	3
CET	264	Design Project [2]	3
		Total	**17**

120 credits are required for the AAS

[1] May be substituted with any course or combination of courses approved by the instructional dean.

[2] May be substituted with CET 266 and CET 267 or CET 265, CET 288 or CET 291 with permission of the instructor.

COMMUNICATION STUDIES PRE-MAJOR
AA–DTA: SCC/SFCC

Speaking and listening are the most used means of communication. Career opportunities for students trained in communication studies are found in the areas of public relations, personnel, human resource management, drama, education, intercultural communication, diversity training, and speech correction. A broad training in communication studies also provides an excellent background for human services, legal, political, and business careers.

The communication studies courses meet the needs of students desiring to improve speaking and listening skills, to fulfill graduation requirements, or to complete the first two years of a transfer program to a four–year school with a major or minor in communication studies, drama or radio–television.

AA–DTA

	Suggested Courses to Consider [1]	90
	Total	**90**

90 credits are required for the AA–DTA

[1] Consult a counselor or academic adviser for recommended courses specific to student's choice of transfer institution.

COMPUTER AND NETWORK SUPPORT
Certificate: SFCC

This certificate concentrates on the practical operation, maintenance and use of computers, computer networks and their peripherals. This intensive hands–on program prepares the certificate holder to maintain the hardware and software of small to medium computer and network systems. Computers are networked in LANs and on the Internet in homes, industries and offices. This program teaches students to maintain and keep these systems running. Students also learn to assist and train computer users in the use of modern software and hardware.

This certificate is intended to prepare students for entry–level positions in computer/network support departments or as the computer/network specialist in a small to medium size office. Students are expected to have other skills needed to integrate this certificate with the skills necessary for the nature of employment they have or seek.

Certificate
Prerequisites:

– IS	103	Information Technology Fundamentals
– IS	144	Programming Fundamentals
– IS	160	Internet Fundamentals

First Quarter

IS	132	Computer Ethics & Law	5
IS	162	Data Communications and Networks	3
IS	260	Database Theory	5
		Total	**13**

Second Quarter

IS	140	Computer and Network Support	5
IS	244	Network Security I	5
IS	262	Network Management	5
		Total	**15**

Third Quarter

BUS	280	Human Relations in Business [1]	5
CS	121	UNIX/Linux	3
IS	210	Internet Programming I	3
IS	228	Internet Servers	5
		Total	**16**

44 credits are required for the Certificate

[1] BUS 280 may be substituted with HS 136.

COMPUTER FORENSICS/NETWORK SECURITY
Certificate: SFCC

The Computer Forensics/Network Security program is designed to provide students with capabilities in several areas of computing:

- Digital evidence recovery
- Forensic laboratory analysis
- Legal and technical issues regarding seizure and acquiring computer evidence, and chain of custody
- Computer network protocols and security, intrusion detection, and network forensics

This certificate is intended to provide students with the essential skills, knowledge and experience necessary to deal with computer forensics and computer/network security.

NOTE: This certificate is not for beginners; please contact the department for more information.

Certificate
First Quarter

IS	132	Computer Ethics & Law	5
IS	162	Data Communications and Networks	3
IS	210	Internet Programming I	3
IS	260	Database Theory	5
		Total	**16**

Second Quarter

IS	234	Computer Forensics I	5
IS	244	Network Security I	5
IS	262	Network Management	5
		Total	**15**

Third Quarter

CS	121	UNIX/Linux	3
IS	236	Computer Forensics II	5
IS	245	Network Security II	5
		Total	**13**

44 credits are required for the Certificate

COMPUTER SCIENCE PRE-MAJOR
AS–T 2: SFCC

The Associate in Computer Science (AS–T #2) degree is an articulated transfer agreement for computer science majors between community colleges and most four–year institutions within the state of Washington. This degree shall only be granted to students who have earned a cumulative grade point average of 2.0. Students will enter the four–year institution at junior standing. Admission to Washington four–year institutions' schools of education is not guaranteed to students holding an Associate in Computer Science AS–T #2 degree. **It is highly recommended that students meet with a counselor or academic adviser** at Spokane Falls Community College on a regular basis to be sure that the requirements specified in this degree are met. Students should also seek academic advising at the four–year institution to which they plan to transfer early in their educational planning to learn about additional requirements and procedures for admission. To earn this degree, students must complete a minimum of 90 credits in academic courses numbered 100 or above and meet specific

distribution requirements. Courses must be chosen from the following specified distribution areas: communication –5 credits, humanities/social sciences –15 credits, mathematics –25 credits, science –20 credits, and 25 credits in computer science courses. **At least 5 credits must be W–designated (writing–intensive).**At least 30 credits must be earned from Spokane Community College or Spokane Falls Community College with at least 15 credits earned in residence at the college awarding the degree or certificate. At SFCC, all prior college–level credits and grade points are transferred for calculating total credits and GPA. This degree does not fulfill all general education requirements of four–year institutions.

Use this program outline in conjunction with the degree worksheet which shows a full course listing for each distribution area. Consult a counselor or academic adviser for recommended courses specific to student's choice of transfer institution.

AS–T 2

First Quarter

CHEM&	161	General Chem: w/Lab I	5
CS&	141	Computer Science I Java [1]	5
MATH&	151	Calculus I	5
		Total	**15**

Second Quarter

CS	142	Introduction to Computer Science II [1]	5
MATH&	152	Calculus II	5
		Humanities/Social Sciences Elective	5
		Total	**15**

Third Quarter

ENGL&	101	English Composition I	5
MATH&	153	Calculus III [2]	5
		Humanities/Social Sciences Elective	5
		Total	**15**

Fourth Quarter

CS	211	C for Programmers [1]	5
MATH	220	Elementary Linear Algebra [1]	5
PHYS	201	Engineering Physics I [1]	5
		Total	**15**

Fifth Quarter

CS	253	Object-Oriented Programming with C++ [1]	5
PHYS	202	Engineering Physics II [1]	5
		Humanities/Social Sciences Elective	5
		Total	**15**

Sixth Quarter

CS	280	Data Structures [1]	5
MATH	245	Discrete Mathematics [2]	5
PHYS	203	Engineering Physics III [1]	5
		Total	**15**

90 credits are required for the AS–T 2

[1] This course offered at SFCC only.
[2] Math 221 may be taken instead of Math& 153 or MATH 245. Consult a counselor or adviser for recommended course.

CORRECTIONS
AAS: SCC

The Corrections and Security curriculum is made up of courses designed to prepare students for a career in the corrections arena with an emphasis on developing skills and knowledge that pertain to working in correctional facilities.

The Corrections program is an outgrowth of recognition of the increasing need for trained personnel in the field. This area of criminal justice is experiencing a great deal of change and expansion. New trends in inmate management and new standards for offender care have contributed to an increased need for employment of more people who possess skills and knowledge applicable to a variety of job requirements.

Students in this field are encouraged to seek academic counseling. Only a portion of this two–year curriculum is transferable to four–year institutions. Students interested in a four–year degree should inquire at the college to which they plan to attend or transfer for specific information.

This is a recommended course of study. Students may take required courses any time they are offered. (Not all classes are offered every quarter.)

Program Requirements: admittance to the Criminal Justice core classes requires the student's age to be 18 or with instructor's permission. All students are required to carry student accident insurance throughout their enrollment in the Criminal Justice program. Any student with an arrest record must have the department chair approval to take any Criminal Justice classes and/or to enter the Criminal Justice program.

AAS

CJ	102	Administration of Justice	5
CJ&	105	Intro to Corrections	5
CJ	106	Introduction to Juvenile Control	3
CJ	107	Dynamics of Deviant Behavior	5
CJ	132	Criminal Justice Physical Training [1]	1
CJ	150	Criminal Justice Report Writing	5
CJ	205	Introduction to Criminal Law	5
CJ	209	Human Relations	3
CJ	212	Professional Development	1
CJ	215	Corrections-Security-Practice and Procedure	5
CJ	216	Communication Techniques with the Incarcerated Offender	5
CJ	225	Advanced Techniques in Correctional Programming	5
CJ	227	Minority Studies	5
CJ	228	Ethics - Standards of Conduct	3
CJ	230	Institutional Programming	3
CJ	237	Criminal Justice Self-defense [2]	3
CMST&	101	Introduction to Communication [3]	5
CMST&	210	Interpersonal Communication [3]	5
EMS	120	Basic First Aid in the Workplace	2
ENGL&	101	English Composition I [3]	5
ENGL&	235	Technical Writing [3]	5
		Math Electives [4]	5
		Recommended Electives List A	15
		Recommended Electives List B [2]	3
		Recommended PE Electives	2
		Total	**109**

109 credits are required for the AAS

Recommended Electives List A

ASL&	121	Am Sign Language I	5
BIOL&	160	General Biology w/Lab	5
BUS&	201	Business Law	5
BUS	217	Business Statistics	5
CHEM	101	General Chemistry	5
CIS	110	Introduction to Computer Applications	5
HLTH	101	Health and Wellness	3
HLTH	104	Stress Management	3
HUM&	101	Intro to Humanities	5
HUM	102	Introduction to Women's Studies	5
PHIL&	101	Intro to Philosophy	5
PHIL	210	Ethics	5
PSYC&	100	General Psychology	5

PSYC	210	Conception through Adolescent Developmental Psychology	5
PSYC	250	Psychology of Adjustment	5
RUSS&	121	Russian I	5
SOC&	101	Intro to Sociology	5
SOC	221	Race and Ethnic Relations	5
SOC	261	Crime and Justice	5
SPAN&	121	Spanish I	5

Recommended Electives List B

CJ	265	Service Learning Volunteer Project [5]	3
CJ	266	Cooperative Education Seminar [5]	1
CJ	267	Cooperative Education Work Experience [5]	1-2
CJ	288	Cooperative Education Work Experience (No Seminar) [5]	1-3

Recommended PE Electives

CJ	133	Criminal Justice Physical Training [1]	1
CJ	241	Criminal Justice Physical Training [1]	1
CJ	242	Criminal Justice Physical Training [1]	1
CJ	243	Criminal Justice Physical Training [1]	1
PE	186	Fast Fitness, Beginning [1]	1

[1] Student's must have medical insurance and a doctor's release if needed; requires fitness assessment. If assessed below minimum fitness level, CJ 208 is a recommended prerequisite. PE 186 (for audit or credit) is required to be taken concurrently with CJ 132, 133, 208, 241, 242 and 243 (repeats of these CJPT courses are authorized for graduation).

[2] Students must pass one quarter of CJPT to enroll in this course.

[3] This course may be substituted with any course or combination of courses approved by the instructional dean.

[4] This math course may be substituted with APLED 112, BUS 103 or any math course numbered 100 or above.

[5] CJ 266 and CJ 267 or CJ 288 or any criminal justice course must be taken concurrently. Students must pass one quarter of CJPT to enroll in this course.

CORRECTIONS (AAS-T)
AAS–T: SCC

The Corrections and Security curriculum is made up of courses designed to prepare students for a career in the corrections arena with an emphasis on developing skills and knowledge that pertain to working in correctional facilities.

The Corrections program is an outgrowth of recognition of the increasing need for trained personnel in the field. This area of criminal justice is experiencing a great deal of change and expansion. New trends in inmate management and new standards for offender care have contributed to an increased need for employment of more people who possess skills and knowledge applicable to a variety of job requirements.

This AAS–T degree is transferable to some four–year institutions. Students interested in transfer should contact the SCC Criminal Justice program instructors or the department chair for a list of four–year institutions that have agreed to accept this degree.

A prior criminal, traffic or drug history may exclude individuals from employment. For further information, contact a program instructor.

This is a recommended course of study. Students may take required courses any time they are offered. (Not all classes are offered every quarter.)

Program requirements: admittance to the Criminal Justice core classes requires the student's age to be 18 or with instructor's permission. All students are required to carry student accident insurance throughout their enrollment in the Criminal Justice program. Any student with an arrest record must have department chair approval to take any Criminal Justice classes and/or to enter the Criminal Justice program.

AAS–T

CJ	102	Administration of Justice	5
CJ&	105	Intro to Corrections	5
CJ	106	Introduction to Juvenile Control	3
CJ	107	Dynamics of Deviant Behavior	5
CJ	132	Criminal Justice Physical Training [1]	1
CJ	150	Criminal Justice Report Writing	5
CJ	205	Introduction to Criminal Law	5
CJ	209	Human Relations	3
CJ	212	Professional Development	1
CJ	215	Corrections-Security-Practice and Procedure	5
CJ	216	Communication Techniques with the Incarcerated Offender	5
CJ	225	Advanced Techniques in Correctional Programming	5
CJ	227	Minority Studies	5
CJ	228	Ethics - Standards of Conduct	3
CJ	230	Institutional Programming	3
CJ	237	Criminal Justice Self-defense [2]	3
CMST&	101	Introduction to Communication [3]	5
CMST&	210	Interpersonal Communication [3]	5
EMS	120	Basic First Aid in the Workplace	2
ENGL&	101	English Composition I [3]	5
ENGL&	235	Technical Writing [3]	5
MATH&	107	Math in Society [3]	5
		Recommended Electives List A	15
		Recommended Electives List B	3
		Recommended PE Electives	2
		Total	**109**

109 credits are required for the AAS–T

Recommended Electives List A

ASL&	121	Am Sign Language I	5
BIOL&	160	General Biology w/Lab	5
BUS&	201	Business Law	5
BUS	217	Business Statistics	5
CHEM&	110	Chemical Concepts w/Lab	5
CIS	110	Introduction to Computer Applications	5
HLTH	101	Health and Wellness	3
HLTH	104	Stress Management	3
HUM&	101	Intro to Humanities	5
HUM	102	Introduction to Women's Studies	5
PHIL&	101	Intro to Philosophy	5
PHIL	210	Ethics	5
PSYC&	100	General Psychology	5
PSYC	210	Conception through Adolescent Developmental Psychology	5
PSYC	250	Psychology of Adjustment	5
RUSS&	121	Russian I	5
SOC&	101	Intro to Sociology	5
SOC	221	Race and Ethnic Relations	5
SOC	261	Crime and Justice	5
SPAN&	121	Spanish I	5

Recommended Electives List B

CJ	265	Service Learning Volunteer Project	3
CJ	266	Cooperative Education Seminar [4]	1
CJ	267	Cooperative Education Work Experience [4]	1-2
CJ	288	Cooperative Education Work Experience (No Seminar) [4]	1-3

Recommended PE Electives

CJ	133	Criminal Justice Physical Training [1]	1
CJ	241	Criminal Justice Physical Training [1]	1
CJ	242	Criminal Justice Physical Training [1]	1

CJ	243	Criminal Justice Physical Training [1]	1
PE	186	Fast Fitness, Beginning [1]	1

[1] Requires medical insurance and a doctor's release if needed; requires fitness assessment. If assessed below minimum fitness level, CJ 208 is a recommended prerequisite. PE 186 (for audit or credit) is required to be taken concurrently with CJ 132, 133, 208, 241, 242 and 243 (repeats of these CJPT courses are authorized for graduation).
[2] Students must pass one quarter of CJPT to enroll in this course.
[3] This course may be substituted with any course or combination of courses approved by the instructional dean.
[4] CJ 266 and CJ 267 or CJ 288 must be taken concurrently or may be substituted with any criminal justice course.

COSMETOLOGY
AAS: SCC

Cosmetology is a diverse field that offers a variety of employment opportunities. SCC's Cosmetology program provides the education and training needed to successfully compete in today's job market. Upon successful completion of the 1,600 hour program, students are prepared to take the Washington State Board Exams. After passing this exam, they will be qualified to receive a license for Cosmetology.

This program includes haircutting, trimming of facial hair, hair styling, permanent waving, chemical relaxing, tinting and bleaching, and temporary superfluous hair removal; artificial hair; manicuring and pedicuring of natural nails; basic skin care and theory of diseases and disorders of the scalp, skin, hair and nails; and anatomy as it relates to cosmetology. In addition, safety and sanitation measures are stressed throughout the program. Students also must complete a first aid class. Students will be given review testing and simulated performance evaluations in preparation for the state licensing examination.

Students must complete the program and pass the exit exams in order to be prepared to take the Washington State examination for Cosmetology.

Additional requirements for the AAS degree consist of general education requirements in the areas of written communication, human relations/leadership and computation. Students should check with the counseling department for assistance in planning their schedules.

Program Requirements:

- Students must maintain a 2.1 in all professional classes to complete the program and pass exit exams with a minimum score of 2.1 to be prepared to take the Washington state licensing exam for cosmetology.
- Upon successful completion of the coursework, the student will be prepared to take the Washington State Examination of Cosmetology.

Physical Requirements:

- Normal or corrected vision
- Physical dexterity, i.e., small grasp manipulation
- Must be able to work with arms at shoulder level for extended periods of time
- Must be able to stand for extended periods of time

AAS

First Quarter

APLED	112	Applied Mathematics [1]	5
APLED	121	Applied Written Communication [1]	4
CIS	110	Introduction to Computer Applications [2]	5
COS	101	Introduction to Cosmetology [3]	2
		Total	**16**

Second Quarter

COS	111	Cosmetology, Esthetics and Manicuring Concepts I	5
COS	112	Cosmetology, Esthetics and Manicuring Applications I	12
		Total	**17**

Third Quarter

COS	121	Cosmetology, Esthetics and Manicuring Concepts II	5
COS	122	Cosmetology, Esthetics and Manicuring Applications II	11
		Total	**16**

Fourth Quarter

COS	131	Intermediate Cosmetology I	5
COS	132	Intermediate Cosmetology Applications I	11
		Total	**16**

Fifth Quarter

COS	241	Intermediate Cosmetology II	5
COS	242	Intermediate Cosmetology Applications II	10
EMS	120	Basic First Aid in the Workplace	2
		Total	**17**

Sixth Quarter

APLED	125	Employment Preparation [4]	3
COS	251	Advanced Cosmetology I	5
COS	252	Advanced Cosmetology Applications I [5]	10
		Total	**18**

Seventh Quarter

COS	261	Advanced Cosmetology II	5
COS	262	Advanced Cosmetology Applications II [5]	10
MMGT	205	Small Business Planning [6]	5
		Total	**20**

Eighth Quarter

		Approved Cosmetology Electives [7]	0-13
		Approved Credits for Additional Coursework [8]	0-5
		Total	**0–18**

120-138 credits are required for the AAS

Approved Cosmetology Electives

COS	288	Cooperative Education Work Experience (No Seminar) [9]	1-3
HUM	141	Introduction to Film [7]	5
HUM	207	Basic Movie Making Techniques [7]	5

Approved Credits for Additional Coursework

COS	275	Cosmetology Application [8]	1-5

[1] This related education requirement may be met by any course or combination of courses approved by the instructional dean or department chair. A minimum grade of 1.5 must be achieved in APLED 112 and 2.0 in APLED 121.
[2] CIS 110 is offered online and/or can be taken as CIS 105 for five credits. A minimum grade of 1.5 must be achieved in CIS 110.
[3] A minimum grade of 2.1 must be achieved in COS 101.
[4] APLED 125 is offered online. This related education requirement may be met by any course or combination of courses approved by the instructional dean or department chair. APLED 125 may be substituted with HUM 207 if seeking additional eighth quarter dean issued certificate.
[5] COS 252 or COS 262 may be substituted with COS 288. Washington State licensure requirements allow up to 10% of student academic instruction to be met by an on–site instructional experience at a beauty salon.

[6] MMGT 205 may be substituted with HUM 141 if seeking additional eighth quarter dean issued certificate.
[7] Approved electives: COS 288 and HUM 141, HUM 207 may be taken by currently enrolled AAS degree Cosmetology students desiring to receive additional training during the summer quarter (8th quarter) instructor permission required. Completion of these courses will entitle the student to a certificate of completion issued by the dean of instruction for technical education only and not a state issued certificate.
[8] COS 275 is available for students who have not accumulated enough hours to satisfy the Cosmetology AAS degree requirements.
[9] Co–Op enrollment is available with permission of the instructor.

CREDIT AND FINANCIAL MANAGEMENT
Certificate: SFCC

The objectives of this certificate are to educate students for entry–level employment in the finance/credit field; and to provide continuing education opportunities for people currently working in the field, support courses for other business programs, and general financial and credit education to meet community needs.

The certificate program is based on information from banks, mortgage companies, finance companies, credit unions and retail credit institutions in the Spokane area.

Certificate
First Quarter

ACCT&	201	Prin of Accounting I	5
BUS	100	Money Management	3
BUS	105	Principles of Leadership	3
CRMGT	190	Business Credit Principles	3
		Computer Elective/Information Systems	1
		Total	**15**

Second Quarter

BT	107	Business Communications [1]	3
BUS	103	Basic Business Math and Electronic Calculators	5
CRMGT	140	Financial Statement Analysis	3
CRMGT	150	Introduction to Investments	2
MMGT	223	Customer Service	3
		Total	**16**

Third Quarter

BT	108	Business Communications [1]	3
BUS&	201	Business Law	5
CAPPS	151	Excel I	2
CRMGT	110	Introduction to Finance	3
CRMGT	220	Credit Law/Collection Techniques	3
		Total	**16**

47 credits are required for the Certificate

[1] BT 107 and 108 may be substituted with ENGL& 101. If ENGL& 101 is substituted, an additional credit is required to obtain the minimum 47 credits for the certificate.

CRIMINAL JUSTICE
AAS, Certificate: SCC

The Criminal Justice curriculum is made up of courses and a carefully selected group of general education requirements designed to prepare each student for a career in the field of criminal justice. These courses prepare students with theory and practical skills in the areas of patrol procedures, criminal law, criminal procedures, marksmanship, physical training, investigations, interview, communications and human relations. Students are carefully counseled in order to ensure they are able to enter a law enforcement agency of their choice. This counseling process includes physical, mental and emotional areas, as well as background requirements. Students are required to take various examinations common to the field of criminal justice. These examinations include quarterly physical training assessments. Passing these physical training assessments is a prerequisite to CJ 237.

Students in this field are encouraged to seek academic counseling. Only a portion of this two–year AAS degree is transferable to four–year institutions. Students interested in four–year degrees should inquire at the college to which they plan to transfer for specific information.

Credits from the police academy training can apply toward meeting the course requirements of this program.

A prior criminal, traffic or drug history may exclude individuals from employment. For further information, contact a program instructor.

This is a recommended course of study. Students may take required courses any time they are offered. (Not all classes are offered every quarter.)

Program Requirements: admittance to the Criminal Justice core classes requires the student's age to be 18 or with instructor's permission. All students are required to carry student accident insurance throughout their enrollment in the Criminal Justice program. Any student with an arrest record must have the department chair approval to take any Criminal Justice classes and/or to enter the Criminal Justice program.

AAS

AQUAT	101	Beginning Swimming	1
CJ&	101	Intro to Criminal Justice	5
CJ	102	Administration of Justice	5
CJ	103	Police Organization and Administration	3
CJ	104	Crime Scene Diagramming	5
CJ	108	Introduction to Traffic Investigation [1]	3
CJ	132	Criminal Justice Physical Training [2]	1
CJ	133	Criminal Justice Physical Training [2]	1
CJ	150	Criminal Justice Report Writing	5
CJ	200	Officer's Survival [3]	5
CJ	201	Laws of Arrest, Search and Seizure [4]	5
CJ	203	Police Interviewing Techniques	3
CJ	205	Introduction to Criminal Law [4]	5
CJ	209	Human Relations	3
CJ	210	Police Psychology	3
CJ	211	Crime Scene Investigations [5]	6
CJ	212	Professional Development	1
CJ	228	Ethics - Standards of Conduct	3
CJ	235	Firearms Safety [6]	2
CJ	236	Firearms Qualifications [6]	2
CJ	237	Criminal Justice Self-defense [7]	3
CJ	241	Criminal Justice Physical Training [2]	1
CJ	242	Criminal Justice Physical Training [2]	1
CJ	243	Criminal Justice Physical Training [2]	1
CMST&	101	Introduction to Communication	5
CMST&	210	Interpersonal Communication	5
ENGL&	101	English Composition I	5
ENGL&	235	Technical Writing	5
		Math [8]	5
		Recommended Electives List A	15
		Recommended Electives List B	3
		Total	**116**

116 credits are required for the AAS

Recommended Electives List A

ASL&	121	Am Sign Language I	5
BIOL&	160	General Biology w/Lab	5
BT	101	Keyboarding	5
BT	160	Job Preparation Techniques	3
BUS	102	Math Skills for Business	3
BUS	103	Basic Business Math and Electronic Calculators	5
BUS	280	Human Relations in Business	5
CHEM	101	General Chemistry	5
CIS	110	Introduction to Computer Applications	5
HUM&	101	Intro to Humanities	5
HUM	102	Introduction to Women's Studies	5
PHIL&	101	Intro to Philosophy	5
PHIL	210	Ethics	5
PSYC&	100	General Psychology	5
RUSS&	121	Russian I	5
SOC&	101	Intro to Sociology	5
SOC	221	Race and Ethnic Relations	5
SOC	261	Crime and Justice	5
SPAN&	121	Spanish I	5

Recommended Electives List B

CJ	265	Service Learning Volunteer Project	3
CJ	266	Cooperative Education Seminar [9]	1
CJ	267	Cooperative Education Work Experience [9]	1-2
CJ	288	Cooperative Education Work Experience (No Seminar) [9]	1-3

[1] CJ 101, 102 and 104 are prerequisites of the AAS degree.
[2] Requires medical insurance and a doctor's release if needed; requires fitness assessment. If assessed below minimum fitness level, CJ 208 is a recommended prerequisite. PE 186 (for audit or credit) is required to be taken concurrently with CJ 132, 133, 208, 241, 242 and 243 (repeats of these CJPT courses are authorized for graduation).
[3] CJ 150, 201, 205 and 237 are prerequisites of the AAS degree.
[4] CJ 101 and 102 are prerequisites of the AAS degree.
[5] CJ 104, 150, 201, 203 and 205 are prerequisites.
[6] CJ 235 and 236 must be taken concurrently.
[7] Passing one quarter of CJPT is required before taking this course.
[8] This math course may be substituted with APLED 112, BUS 103 or any math course numbered 100 or above.
[9] CJ 266 and 267 or 288 or any criminal justice course must be taken concurrently.

Certificate
Law Enforcement Level 1
This Law Enforcement Level 1 Certificate is designed for students who wish to obtain basic skills in law enforcement working as a Reserve Law Enforcement Officer. Permission of the instructor is required for admission to the program.

First Quarter

CJ&	101	Intro to Criminal Justice	5
CJ	150	Criminal Justice Report Writing	3
CJ	200	Officer's Survival [1]	5
CJ	205	Introduction to Criminal Law [1]	5
		Total	**18**

18 credits are required for the Certificate

[1] CJ 150 and CJ& 101 are a prerequisite of the Level 1 Certificate program.

Law Enforcement Level 2
This Law Enforcement Level 2 Certificate program is designed for students who wish to obtain skills in law enforcement as minimum entry requirements for the industry. Permission of the instructor is required for admission to the program.

First Quarter

CJ&	101	Intro to Criminal Justice	5
CJ	104	Crime Scene Diagramming	5
CJ	108	Introduction to Traffic Investigation [1]	3
CJ	150	Criminal Justice Report Writing	5
		Total	**18**

Second Quarter

CJ	200	Officer's Survival [2]	5
CJ	201	Laws of Arrest, Search and Seizure [3]	5
CJ	205	Introduction to Criminal Law [3]	5
CJ	237	Criminal Justice Self-defense [4]	3
		Total	**18**

Third Quarter

CJ	235	Firearms Safety [5]	2
CJ	236	Firearms Qualifications [5]	2
CMST&	210	Interpersonal Communication	5
ENGL&	101	English Composition I	5
		Math [6]	5
		Total	**19**

55 credits are required for the Certificate

[1] CJ& 101 and 104 are prerequisites of the Level 2 Certificate program.
[2] CJ 150, 201, 205 and 237 are prerequisites of the Level 2 Certificate.
[3] CJ& 101 is a prerequisite of the Level 2 Certificate program.
[4] Passing one quarter of CJPT is required before taking this course.
[5] CJ 235 and 236 must be taken concurrently.
[6] This math course may be substituted with APLED 112, BUS 103 or any math course numbered 100 or above.

CRIMINAL JUSTICE (AAS-T)
AAS–T: SCC

The Criminal Justice curriculum is made up of courses and a carefully selected group of general education requirements designed to prepare each student for a career in the field of criminal justice. These courses prepare students with theory and practical skills in the areas of patrol procedures, criminal law, criminal procedures, marksmanship, physical training, investigations, interviewing, communication skills, and human relations.

Students are carefully counseled in order to ensure they are able to enter a law enforcement agency of their choice. This counseling process includes physical, mental and emotional areas, as well as background requirements. Students are required to take various examinations common to the field of criminal justice. These examinations include quarterly physical training assessments. Passing these physical training assessments is a prerequisite to CJ 237.

This AAS–T degree is transferable to some four–year institutions. Students interested in transfer should contact the SCC Criminal Justice program instructors or the department chair for a list of four–year institutions that have agreed to accept this degree.

Credits from the police academy training can apply toward meeting the course requirements of this program.

A prior criminal, traffic or drug history may exclude individuals from employment. For further information, contact a program instructor.

Program Requirements: admittance to the Criminal Justice core classes requires the student age to be 18 or with instructor's permission. All students are required to carry student accident

insurance throughout their enrollment in the Criminal Justice program. Any student with an arrest record must have the department chair approval to take any Criminal Justice classes and/or to enter the Criminal Justice program.

AAS–T

AQUAT	101	Beginning Swimming	1
CJ&	101	Intro to Criminal Justice	5
CJ	102	Administration of Justice	5
CJ	103	Police Organization and Administration	3
CJ	104	Crime Scene Diagramming	5
CJ	108	Introduction to Traffic Investigation [1]	3
CJ	132	Criminal Justice Physical Training [2]	1
CJ	133	Criminal Justice Physical Training [2]	1
CJ	150	Criminal Justice Report Writing	5
CJ	200	Officer's Survival [3]	5
CJ	201	Laws of Arrest, Search and Seizure [4]	5
CJ	203	Police Interviewing Techniques	3
CJ	205	Introduction to Criminal Law [4]	5
CJ	209	Human Relations	3
CJ	210	Police Psychology	3
CJ	211	Crime Scene Investigations [5]	6
CJ	212	Professional Development	1
CJ	228	Ethics - Standards of Conduct	3
CJ	235	Firearms Safety [6]	2
CJ	236	Firearms Qualifications [6]	2
CJ	237	Criminal Justice Self-defense [7]	3
CJ	241	Criminal Justice Physical Training [2]	1
CJ	242	Criminal Justice Physical Training [2]	1
CJ	243	Criminal Justice Physical Training [2]	1
CMST&	101	Introduction to Communication [8]	5
CMST&	210	Interpersonal Communication [8]	5
ENGL&	101	English Composition I [8]	5
ENGL&	235	Technical Writing [8]	5
MATH&	107	Math in Society [8]	5
		Recommended Electives List A	15
		Recommended Electives List B	3
		Total	**116**

116 credits are required for the AAS–T

Recommended Electives List A

ASL&	121	Am Sign Language I	5
BIOL&	160	General Biology w/Lab	5
BT	101	Keyboarding	5
BT	160	Job Preparation Techniques	3
BUS	102	Math Skills for Business	3
BUS	103	Basic Business Math and Electronic Calculators	5
BUS	280	Human Relations in Business	5
CHEM	101	General Chemistry	5
CIS	110	Introduction to Computer Applications	5
HUM&	101	Intro to Humanities	5
HUM	102	Introduction to Women's Studies	5
PHIL&	101	Intro to Philosophy	5
PHIL	210	Ethics	5
PSYC&	100	General Psychology	5
RUSS&	121	Russian I	5
SOC&	101	Intro to Sociology	5
SOC	221	Race and Ethnic Relations	5
SOC	261	Crime and Justice	5
SPAN&	121	Spanish I	5

Recommended Electives List B

CJ	265	Service Learning Volunteer Project	3
CJ	266	Cooperative Education Seminar [9]	1
CJ	267	Cooperative Education Work Experience [9]	1-2
CJ	288	Cooperative Education Work Experience (No Seminar) [9]	1-3

[1] CJ 101, 102 and 104 are prerequisites.
[2] Requires medical insurance and a doctor's release if needed; requires fitness assessment. If assessed below minimum fitness level, CJ 208 is a recommended prerequisite. PE 186 (for audit or credit) is required to be taken concurrently with CJ 132, 133, 208, 241, 242 and 243 (repeats of these CJPT courses are authorized for graduation).
[3] CJ 150, 201,205 and 237 are prerequisites.
[4] CJ& 101 and 102 are prerequisites.
[5] CJ 104, 150, 201, 203 and 205 are prerequisites.
[6] CJ 235 and 236 must be taken concurrently.
[7] Passing one quarter of CJPT is required before taking this course.
[8] May be substituted with any course or combination of courses approved by the instructional dean.
[9] CJ 266 and CJ 267 or CJ 288 or any criminal justice course must be taken concurrently.

CULINARY ARTS
AAS: SCC

Basic and advanced procedures in food preparation are included in the two–year Culinary Arts program. A detailed study is made of the various cooking methods for meats, fish, poultry, vegetables, soups and sauces. Menu terminology and cooking terms are defined and illustrated. Students are given the opportunity to study management factors affecting food cost control, specifications and standards for foods, sanitation, kitchen planning, kitchen equipment, and personnel policies.

This program is accredited by the American Culinary Federation (ACF).

Students must complete all courses with a 2.0 grade or better before advancing to subsequent quarters.

AAS

First Quarter

APLED	121	Applied Written Communication [1]	4
CUL	110	Introduction to Culinary Arts	5
CUL	115	Food Sanitation [2]	3
EMS	120	Basic First Aid in the Workplace	2
HM	112	Hospitality Mathematics	3
		Total	**17**

Second Quarter

CUL	124	Cooking Applications I [1]	7-10
CUL	126	Food Science	5
HM	116	Nutrition for Chefs and Restaurant Managers	3
		Total	**15–18**

Third Quarter

CUL	123	Espresso	2
CUL	127	Banquet Service	2
CUL	131	A la Carte Service	9
HM	130	Human Relations [1]	5
		Total	**18**

Fourth Quarter

CUL	253	Advanced Cooking Theory	5
CUL	254	A la Carte Cooking I	10
CUL	288	Cooperative Education Work Experience (No Seminar) [3]	5
		Total	**20**

Fifth Quarter

BAK	140	Yeast Doughs	1
CUL	243	Theory of Restaurant Baking	5
CUL	244	Restaurant Baking Applications	10
CUL	265	Hospitality Cost Controls	5
		Total	**21**

Sixth Quarter

CUL	255	Menu Planning	3
CUL	260	Presidential	1
CUL	263	Theory of Modern Cuisine	5
CUL	264	A la Carte Cooking II	9
		Total	**18**

109-112 credits are required for the AAS

[1] This course may be substituted with any course or combination of courses approved by the instructional dean.
[2] This course is required for certification by the Educational Foundation of the National Restaurant Association.
[3] CULL 288 may be substituted with CUL 266 and 267 for five credits.

CUSTOMER SERVICE REPRESENTATIVE
AAS: SCC

The Customer Service Representative program prepares students to work as commercial or residential service representatives in the telephone industry and also for similar positions in major department stores, collection agencies, credit bureaus, airlines, travel agencies, medical insurance agencies, public utilities and telephone answering services. This program is designed to provide students with the necessary knowledge and skills to deal directly with customers in matters of credit application, bill collection, making arrangements for equipment installation and servicing, and acting as the company representative in special problems that may arise.

In order to earn a Customer Service Representative AAS degree, a student must maintain a 2.0 GPA in all individual courses.

AAS

First Quarter

BT	102	Document Processing	5
BT	105	Basic Grammar for Business II	5
BT	151	Business Student Preparation	5
CATT	102	Introduction to Outlook	2.5
		Total	**17.5**

Second Quarter

BT	109	Business Communications	5
BT	165	Word Processing	5
BT	231	Office Procedures	5
BUS&	101	Intro to Business	5
		Total	**20**

Third Quarter

ACCT	151	College Accounting I [1]	5
BT	201	Information Processing	5
BUS	103	Basic Business Math and Electronic Calculators [2]	5
		Total	**15**

Fourth Quarter

BT	202	Advanced Information Processing	5
BT	272	Business Correspondence	5
ECON	100	Fundamentals of Economics [3]	5
		Total	**15**

Fifth Quarter

BT	250	Information Technology	5
BUS&	201	Business Law	5
CMST&	210	Interpersonal Communication	5
		Total	**15**

Sixth Quarter

BT	160	Job Preparation Techniques	3
BT	260	Administrative Office Management	5
BT	285	Administrative Professional Internship	2
BUS	280	Human Relations in Business	5
		Total	**15**

97.5 credits are required for the AAS

[1] ACCT 151 may be substituted with ACCT& 201.
[2] BUS 103 may be substituted with BT 128.
[3] ECON 100 may be substituted with ECON& 202.

DENTAL ASSISTING
AAS, Certificate: SCC

A one–year program designed to prepare the student for employment as a chairside assistant to the dentist and an additional year for the AAS degree.

Chairside area: record medical and dental history; prepare treatment room; prepare patient for treatment; chart patient information; assist the dentist in general and specialty treatment of patient; sterilize and disinfect dental instruments; expose, process and mount radiographs; teach brushing and flossing; prepare various dental materials; perform expanded functions that are legal in the state of Washington; and order and maintain dental supplies.

Reception area: appoint patients for treatments, maintain a patient recall system, file and maintain patient and office records, complete patient insurance forms and make financial arrangements with patients.

This program is accredited by the American Dental Association. Students who successfully complete the program are eligible to take the Dental Assisting National Board exam.

- High school diploma or GED certificate required
- Appropriate scores in ASSET or COMPASS required
- Computer skills recommended
- Active e–mail account recommended
- Each required course for graduation must be completed with a 2.0 grade or better before proceeding to the next quarter. All electives must be numbered 100 or above.
- Students may repeat a dental assisting course/program once, but it must be repeated within two years.

AAS

BIOL&	160	General Biology w/Lab	5
CHEM&	110	Chemical Concepts w/Lab [1]	5
CMST&	101	Introduction to Communication	5
PSYC&	100	General Psychology	5
SOC&	101	Intro to Sociology	5
		Communication or Humanities Electives	10
		Math/Science Elective	5
		Social Science Elective	5
		Total	**45**

First Quarter

DENT	111	Introduction to Dental Assisting	5
DENT	112	Chairside Related Theory	4
DENT	114	Introduction to Dental Radiology	3
DENT	116	Dental Restorative Techniques	3
DENT	118	Dental Anatomy	4
ENGL&	101	English Composition I	5
		Total	**24**

Second Quarter

CMST&	210	Interpersonal Communication	5
DENT	121	Intermediate Chairside Assisting	6
DENT	122	Chairside Related Theory	4
DENT	124	Advanced Dental Radiology	2
DENT	126	Dental Restorative Techniques	4
DENT	129	Chairside Clinical Experience	2
		Total	**23**

Third Quarter

DENT	131	Advanced Chairside Assisting	6
DENT	136	Dental Restorative Techniques	2
DENT	138	Office Management	3
DENT	139	Chairside Clinical Experience	8
		Total	**19**

111 credits are required for the AAS

[1] CHEM& 110 may be substituted with CHEM& 121.

Certificate
First Quarter

DENT	111	Introduction to Dental Assisting	5
DENT	112	Chairside Related Theory	4
DENT	114	Introduction to Dental Radiology	3
DENT	116	Dental Restorative Techniques	3
DENT	118	Dental Anatomy	4
ENGL&	101	English Composition I	5
		Total	**24**

Second Quarter

CMST&	210	Interpersonal Communication	5
DENT	121	Intermediate Chairside Assisting	6
DENT	122	Chairside Related Theory	4
DENT	124	Advanced Dental Radiology	2
DENT	126	Dental Restorative Techniques	4
DENT	129	Chairside Clinical Experience	2
		Total	**23**

Third Quarter

DENT	131	Advanced Chairside Assisting	6
DENT	136	Dental Restorative Techniques	2
DENT	138	Office Management	3
DENT	139	Chairside Clinical Experience	8
		Total	**19**

66 credits are required for the Certificate

DENTAL HYGIENE PRE-MAJOR
AA–DTA: SCC/SFCC

The skills of a dental hygienist emphasize preventive dentistry. Dental hygienists may be employed in private dental offices, hospitals, group health clinics, public health agencies, school and industry.

Upon completing the pre–Dental Hygiene requirements, the student may then transfer to an approved four–year bachelor's degree program in Dental Hygiene for professional course work. Such a program should be approved by the American Dental Association and the American Dental Hygienist Association. In order to practice, a graduate hygienist must pass a national written board examination given by the American Dental Association and a state licensing examination administered by individual state boards of dental examiners.

Consult with the college counseling department for a listing of approved Dental Hygiene Bachelor's degree programs. Consult a counselor or academic adviser for recommended courses specific to student's choice of
transfer institution.

AA–DTA

	Suggested Courses to Consider [1]	90
	Total	**90**

90 credits are required for the AA–DTA

[1] Consult a counselor or academic adviser for recommended courses specific to student's choice of transfer institution.

DENTISTRY PRE-MAJOR
AA–DTA, Associate in Biology DTA/MRP: SCC/SFCC

Students planning a career in Dentistry should consult the catalog of the school of dentistry to which they plan to transfer. Competition for admission is intense and a high overall college grade point average must be maintained.

It is recommended that students acquire a broad background in areas such as fine arts, speech, languages, literature, business administration and the behavioral sciences.

AA–DTA

	Suggested Courses to Consider [1]	90
	Total	**90**

90 credits are required for the AA–DTA

Associate in Biology DTA/MRP

	Suggested Courses to Consider [1]	90
	Total	**90**

90 credits are required for the Associate in Biology DTA/MRP

[1] Consult a counselor or academic adviser for recommended courses specific to student's choice of transfer institution.

DIAGNOSTIC MEDICAL SONOGRAPHY
AAS: SCC

Diagnostic Medical Sonography is an allied Health Profession where non–physician professionals perform a diagnostic procedure using high frequency sound waves (ultrasound) to produce dynamic visual images of organs, tissues, or blood flow inside the body. Sonography is used to examine many parts of the body: abdomen, breasts, OB/GYN, thyroid, scrotum, and blood vessels. It is also used to guide needles for tissue biopsy or drain an abnormal fluid collection from a body cavity. Sonography is a radiation–free imaging modality and procedures are performed at the request of a physician.

A diagnostic medical sonographer is a highly–skilled professional who uses specialized equipment to create images of structures inside the human body that are used by physicians to make a medical diagnosis. Prior to starting a procedure, the sonographer must obtain an appropriate history, assess physical findings and review pertinent laboratory data. This information is used to tailor the procedure to ensure comprehensive and diagnostic images are acquired.

The program meets the criteria set forth by the Joint Review Committee on Diagnostic Medical Sonography and is accredited by CAAHEP. Upon completion and graduation of the program, graduates are able to take the national Abdomen and OB/GYN registry examinations administered by the American Registry of Diagnostic
Medical Sonography.

Admission Recommendations:

- Active email account
- Computer skills
- CHEM 120 Organic and Biochemistry of Health Sciences
- CHEM& 121 Introduction to Chemistry

Admission Requirements:

- Sonography courses are limited to students of the Diagnostic Medical Sonography program
- A minimum score of 41 on the ASSET test is required in each session

- Students applying to the course must complete 40 hours as a volunteer or employee in patient care setting and 10 of these hours need to be completed in a Sonography department
- Interviews will be conducted as part of the selection process for the Diagnostic Medical Sonography program
- Students must provide three confidential letters of recommendation
- Immunizations and drug screening are required (after being accepted into the Diagnostic Medical Sonography program). Forms are available in the SCC registration office
- All math and science prerequisites must have been completed within the last five years with a grade of 2.5 or better. All documentation must be submitted by June 25th of the year of application
- High School diploma or GED certificate

After entering the Diagnostic Medical Sonography program, students are required to obtain a minimum of a 2.0 grade in each class before proceeding to the next quarter. Students may repeat a professional class once, but it must be completed within two years.

AAS
Prerequisites:

– BIOL&	160	General Biology w/Lab	
– BIOL&	241	Human A & P 1	
– BIOL&	242	Human A & P 2	
– CMST&	210	Interpersonal Communication	
– ENGL&	101	English Composition I	
– HED	125	Medical Terminology	
– MATH	099	Intermediate Algebra	
– PHYS	100	Introductory Physics	

First Quarter

HED	109	Human Physiology and Disease	5
SONO	111	Diagnostic Ultrasound I	2
SONO	112	Vascular Fundamentals	4
SONO	121	Human Cross-Section Anatomy	4
SONO	125	Ultrasound Physics and Instrumentation I	5
		Total	**20**

Second Quarter

SONO	122	Vascular Procedures I	4
SONO	131	Diagnostic Ultrasound II	5
SONO	132	Abdominal Pathophysiology	4
SONO	135	Ultrasound Physics and Instrumentation II	5
		Total	**18**

Third Quarter

SONO	123	Survey of Cardiac Sonography	5
SONO	141	Diagnostic Ultrasound III	5
SONO	144	OB/GYN Pathophysiology	4
		Total	**14**

Fourth Quarter

SONO	142	Diagnostic Ultrasound IV	4
SONO	143	Sonography Clinical I	9
		Total	**13**

Fifth Quarter

SONO	251	Advanced Sonography	4
SONO	253	Sonography Clinical II	9
		Total	**13**

Sixth Quarter

SONO	263	Sonography Clinical III	13
		Total	**13**

Seventh Quarter

SONO	273	Sonography Clinical IV	13
		Total	**13**

104 credits are required for the AAS

DIESEL/HEAVY DUTY EQUIPMENT
AAS: SCC

Diesel/Heavy Duty mechanics repair and maintain trucks, busses, logging, mining, agricultural and construction equipment. In addition, they maintain and repair diesel and gasoline engines, compressors and pumps.

Students may enter the program any quarter.

Credit by Non–Traditional Means:

- Credits by non–traditional means may be awarded in place of HLTH 174 and HEQ 294 to those students who have a current Class A Commercial Driver's License (CDL) or are planning on obtaining a Class A CDL prior to enrolling into HEQ 261/262. Six credits of prior learning experience will be awarded with proof of a current Class A CDL, first aid card and employment preparation documentation as evaluated by the program instructor of HEQ 261 and 262.

AAS
First Quarter

APLED	121	Applied Written Communication [1]	4
HEQ	111	Basic Electrical Theory	7
HEQ	112	Basic Electrical Applications	9
		Total	**20**

Second Quarter

APLED	112	Applied Mathematics [1]	4
HEQ	121	Basic Principles of Engine Theory	7
HEQ	122	Basic Engine Applications	9
		Total	**20**

Third Quarter

APLED	123	Leadership Skills for Business and Industry[1]	4
CIS	105	Computer Fundamentals for Vocations I [1]	1
HEQ	131	Principles of Power Train Theory	7
HEQ	132	Power Train Applications	9
		Total	**21**

Fourth Quarter

AGGEN	153	Oxy-acetylene Welding	4
HEQ	241	Heavy Equipment Hydraulic Theory	7
HEQ	242	Heavy Duty Equipment Hydraulic Application	9
		Total	**20**

Fifth Quarter

AGGEN	152	Arc Welding	4
HEQ	251	Practical Shop Procedures	7
HEQ	252	Practical Shop	9
		Total	**20**

Sixth Quarter

HEQ	261	Practical Shop Procedures	7
HEQ	262	Practical Shop	6
		Approved HEQ Elective [2]	6
		Total	**19**

120 credits are required for the AAS

Approved HEQ Elective

HEQ	294	Special Problems	3
HLTH	174	First Aid	3

[1] This related education requirement may be met by any course or combination of courses approved by the instructional dean.
[2] HEQ 294–3 credits and HLTH 174–3 credits offered within the 6th quarter (are required courses for those students who have NOT already received a Class A CDL license, possess a current first aid card and have proof of employment preparation documentation).

DRAMA (ASSOCIATE IN FINE ARTS DEGREE) AFA: SFCC

The Associate of Fine Arts (AFA) in Drama offers a foundation for students pursuing a four year degree in Drama; either a Bachelor of Arts (BA) or a Bachelor of Fine Arts (BFA). To complete the AFA, students complete sixty credits of drama and forty credits of General Education Requirements. Courses satisfying General Education Requirements must include ENGL & 101 (5 credits); MATH& 107 (5 credits); Social Science (5 credits), Lab Science (5 credits) and Non Lab Science (5 credits) with the additional 15 General Education Requirements and credits will be determined based on your transfer destination and in consultation with an academic adviser in Drama.

Students who obtain the AFA will transfer with a minimum of 90 credits to colleges and universities with whom SFCC maintains articulation agreements. University Drama departments typically require an audition or portfolio review for admission to Drama programs. Through ensemble acting experience and applied instruction the AFA provides students the opportunity to audition successfully. Students must maintain a cumulative GPA of 2.0 or better to qualify. 100 credits are required for the AFA.

AFA

First Quarter

DRMA&	101	Intro to Theatre	5
DRMA	106	Rehearsal and Performance	2
DRMA	120	Performance and Audition Techniques	3
DRMA	230	Stagecrafting Theatrical Design	3
ENGL&	101	English Composition I	5
		Total	**18**

Second Quarter

DRMA	106	Rehearsal and Performance	2
DRMA	121	Contemporary Acting	3
DRMA	211	Scenic Design I	5
		Math, Lab Science or Non Lab Science [1]	5
		Total	**15**

Third Quarter

DRMA	107	Rehearsal and Performance	2
DRMA	230	Stagecrafting Theatrical Design	2
ENGL&	102	Composition II [2]	5
		Humanities Group A [1]	5
		Total	**14**

Fourth Quarter

CMST&	101	Introduction to Communication [3]	5
DRMA	107	Rehearsal and Performance	2
DRMA	230	Stagecrafting Theatrical Design	3
		Humanities Group B [1]	5
		Social Science Group A [1]	5
		Total	**20**

Fifth Quarter

DRMA	108	Rehearsal and Performance	2
DRMA	212	Costume Design I	3
		Math, Lab Science or Non Lab Science [1]	5
		Social Science Group B [1]	5
		Total	**15**

Sixth Quarter

DRMA	108	Rehearsal and Performance	3
DRMA	220	Classical Acting	5
DRMA	230	Stagecrafting Theatrical Design	3
DRMA	233	Makeup	2
		Math, Lab Science or Non Lab Science [1]	5
		Total	**18**

100 credits are required for the AFA

[1] Courses in these areas come from the Associate of Arts Degree Requirements. Credits will be determined based on your transfer destination and in consultation with an academic adviser in Drama.
[2] ENGL 114 or ENGL 220 may be substituted for ENGL& 102.
[3] CMST 220 – Public Speaking may be substituted.

DRAMA PRE-MAJOR AA–DTA: SFCC

The aim of the Drama program is the development of appreciation and understanding within the participants and the audience of live theater. The department also attempts through its courses to establish aesthetic values that may be applied to motion pictures and television as well as live theater and to build a respect for the tradition of the theater as a major artistic instrument of society.

AA–DTA

	Suggested Courses to Consider [1]	90
	Total	**90**

90 credits are required for the AA–DTA

Suggested Courses to Consider

ART&	100	Art Appreciation	5
CMST&	101	Introduction to Communication	5
CMST	114	Oral Interpretation of Literature	5
CMST&	220	Public Speaking	5
DRMA&	101	Intro to Theatre	5
DRMA	106	Rehearsal and Performance	1-5
DRMA	107	Rehearsal and Performance	1-5
DRMA	108	Rehearsal and Performance	1-5
DRMA	120	Performance and Audition Techniques	3
DRMA	121	Contemporary Acting	3
DRMA	220	Classical Acting	5
DRMA	221	Acting for Film and Television	5
DRMA	230	Stagecrafting Theatrical Design	1-5
DRMA	233	Makeup	2
ENGL&	111	Intro to Literature	5
ENGL&	114	Intro to Drama	5
ENGL&	220	Intro to Shakespeare	5
ENGL&	236	Creative Writing I	5
ENGL&	237	Creative Writing II	5
HUM	141	Introduction to Film	5
MUSC&	105	Music Appreciation	5

[1] Consult a counselor or academic adviser for recommended courses specific to student's choice of transfer institution. Refer to AA degree worksheet for list of approved courses and credit requirements in each distribution area.

EARLY CHILDHOOD EDUCATION AAS, Certificate: SFCC

The Early Childhood Education program provides experiences in educational theory in the areas of social, emotional, cognitive, physical/motor and creative development for children from birth through age 8. Courses also are available for caregivers of school–age children, ages 5 through 14 years. Now that ongoing research reveals the significance of early development,

professional preparation has become essential to anyone pursuing a career in the education and care of young children. Courses are through eLearning and/or days and evenings.

SFCC Early Childhood Education program options:

- Certificates of Specialization (20–25 credits) –eight certificates that focus on a specific area of study.
- Early Childhood Education Certificate (57–60 credits) – contains the ECED core content courses. Valid first aid card required for certificate.
- Associate in Applied Science (AAS) degree (92–93 credits) –contains the same course work as the ECED certificate above, plus supporting courses and electives which may be modified for articulation into a BA degree.
- Associate of Applied Science Transfer degree (AAS–T) (91–92 credits) –contains ECED core content with the option to transfer to accepting four–year schools.
- Associate of Arts (AA) degree (90 credits) –includes 15 credits of electives in ECED that transfers to four–year schools.
- Articulation with area high schools articulates college credits for completion of specified high school ECED courses.

AAS

First Quarter

ECED	101	Issues and Trends in Early Childhood Education	5
ECED	102	Observation and Documentation	1-2
ECED	103	College Success	3
ECED	124	Methods of Learning	5
		Total	**14–15**

Second Quarter

ECED	135	Infant/Toddler Care and Education	5
ECED	190	Child Development	5
ENGL&	101	English Composition I	5
		Total	**15**

Third Quarter

ECED	226	Curriculum Development	5
ECED	230	Learning Environments	5
EDUC&	204	Exceptional Child	5
HLTH	174	First Aid	3
		Total	**18**

Fourth Quarter

ECED	132	Fostering Social Competence	5
ECED	290	School-age Development	5
		Math Elective [1]	5
		Total	**15**

Fifth Quarter

ECED	254	Dynamics of Family Relationships	5
ECED	281	Capstone Practicum	5
		Program Elective [2]	5
		Total	**15**

Sixth Quarter

ECED	282	Practicum I	5
		Human Relations/Leadership Elective	5
		Program Elective [2]	5
		Total	**15**

92-93 credits are required for the AAS

Human Relations/Leadership Elective

CMST	227	Intercultural Communication	5
HS	136	Improving Interpersonal Communication	5

Math Elective

BUS	110	Number Skills	1
BUS	111	Math Skills	1
BUS	112	Advanced Calculator Skills	1
BUS	113	Essential Business Applications	1
BUS	114	Basic Retail Application	1
BUS	122	Practical Business Math	3
BUS	123	Practical Business Math Applications	5
ECED	126	Math Methods in ECED	3
MATH	090	Pre-Algebra	5

[1] May choose any course or combination of courses for a required five credits of computation. MATH 090 may be substituted with any higher level math course.
[2] This elective requirement may be met by any course or combination of courses numbered 100 or above.

Certificate

Early Childhood Education Certificate

*Valid first aid card required for this one year certificate.

ECED	101	Issues and Trends in Early Childhood Education	5
ECED	102	Observation and Documentation	1-2
ECED	103	College Success	3
ECED	124	Methods of Learning	5
ECED	132	Fostering Social Competence	5
ECED	135	Infant/Toddler Care and Education	5
ECED	190	Child Development	5
ECED	226	Curriculum Development	5
ECED	230	Learning Environments	5
ECED	281	Capstone Practicum	5
ENGL&	101	English Composition I	5
HS	136	Improving Interpersonal Communication	5
		Math Elective [1]	3-5
		Total	**57–60**

57-60 credits are required for the Certificate

Math Elective

BUS	110	Number Skills	1
BUS	111	Math Skills	1
BUS	112	Advanced Calculator Skills	1
BUS	113	Essential Business Applications	1
BUS	114	Basic Retail Application	1
BUS	122	Practical Business Math	3
BUS	123	Practical Business Math Applications	5
ECED	126	Math Methods in ECED	3
MATH	090	Pre-Algebra	5

[1] May choose any course or combination of courses for a required three to five credits of computation. MATH 090 may be substituted with any higher level math course.

Child Care Administration Specialist

ECED	101	Issues and Trends in Early Childhood Education	5
ECED	190	Child Development	5
ECED	290	School-age Development	5
SBM	101	How to Start a Small Business	5
		Total	**20**

20 credits are required for the Certificate

Curriculum Development Specialist

ECED	102	Observation and Documentation	1-2
ECED	124	Methods of Learning	5
ECED	190	Child Development	5
ECED	226	Curriculum Development	5
ECED	230	Learning Environments	5
		Total	**21–22**

21-22 credits are required for the Certificate

Early Childhood Specialist I

ECED	102	Observation and Documentation	1-2
ECED	124	Methods of Learning	5
ECED	132	Fostering Social Competence	5
ECED	190	Child Development	5
ECED	230	Learning Environments	5
		Total	**21–22**

21-22 credits are required for the Certificate

Early Childhood Specialist II
*Must have Early Childhood Specialist I

ECED	101	Issues and Trends in Early Childhood Education [1]	5
ECED	254	Dynamics of Family Relationships	5
ECED	281	Capstone Practicum	5
ECED	282	Practicum I	5
		Total	**20**

20 credits are required for the Certificate

[1] ECED 101 may be substituted with ECED 226 for Early Childhood Specialist II Certificate.

Family Child Care Specialist

ECED	101	Issues and Trends in Early Childhood Education [1]	5
ECED	102	Observation and Documentation	1-2
ECED	132	Fostering Social Competence	5
ECED	190	Child Development	5
ECED	254	Dynamics of Family Relationships	5
		Total	**21–22**

21-22 credits are required for the Certificate

[1] ECED 101 may be substituted with ECED 124 for Family Child Care Specialist Certificate.

Family Services Advocate

ECED	190	Child Development	5
ECED	254	Dynamics of Family Relationships	5
HS	136	Improving Interpersonal Communication	5
HS	281	Practicum I	5
		Total	**20**

20 credits are required for the Certificate

Infant Toddler Specialist

ECED	102	Observation and Documentation	1-2
ECED	132	Fostering Social Competence	5
ECED	135	Infant/Toddler Care and Education	5
ECED	190	Child Development	5
ECED	254	Dynamics of Family Relationships	5
		Total	**21–22**

21-22 credits are required for the Certificate

School–age Care Specialist

ECED	102	Observation and Documentation	1-2
ECED	270	School-age Creative Activities	5
ECED	290	School-age Development	5
		Total	**11–12**

11-12 credits are required for the Certificate

EARLY CHILDHOOD EDUCATION (AAS-T)
AAS–T: SFCC

The AAS–T is an associate degree providing comprehensive core early childhood content (51–52 credits) based on the National Association for the Education of Young Children (NAEYC) and the Washington State Skill standards. The balance of the degree is made up of significant general education coursework (40 credits) necessary for transfer.

Graduation requirements for AAS–T in Early Childhood Education Development: 91–92 credits from the associate of arts degree and the associate in applied science degree:

- Communication Skills: 10 credits of English composition, or 5 credits of English composition and 5 credits of speech
- Quantitative Skills: 5 credits from quantitative reasoning courses –mathematics
- Humanities: 5 credits from group A and 5 credits from group B or C
- Social Sciences: 5 credits from group A and 5 credits from group B
- Mathematics/Science: 5 credits from a laboratory course in group B sciences
- Writing and Diversity: At least one 5–credit writing–intensive course ("W"designated course) must be included within the distribution. At least 5 credits must be chosen from the approved list of diversity courses ("D"designated course).

AAS–T

First Quarter

ECED	101	Issues and Trends in Early Childhood Education	5
ECED	102	Observation and Documentation	1-2
ECED	190	Child Development	5
		Communication	5
		Total	**16–17**

Second Quarter

ECED	124	Methods of Learning	5
ECED	135	Infant/Toddler Care and Education	5
		Communication	5
		Total	**15**

Third Quarter

CMST	227	Intercultural Communication [1]	5
ECED	132	Fostering Social Competence	5
ECED	290	School-age Development [2]	5
		Total	**15**

Fourth Quarter

ECED	226	Curriculum Development	5
ECED	230	Learning Environments	5
		Quantitative/Symbolic Reasoning Course - Math [3]	5
		Total	**15**

Fifth Quarter

ECED	254	Dynamics of Family Relationships	5
		Humanities [3]	5
		Social Sciences: Group A [3]	5
		Total	**15**

Sixth Quarter

ECED	281	Capstone Practicum	5
		Mathematics/Sciences: Group B (lab course) [3]	5
		Social Sciences: Group B [3]	5
		Total	**15**

91-92 credits are required for the AAS–T

Communication

CMST&	101	Introduction to Communication	5
ENGL&	101	English Composition I	5
ENGL&	102	Composition II	5

[1] CMST 227 completes 5 of the 10 credit humanities requirement.
[2] ECED 290 may be substituted with EDUC& 204.
[3] See AA degree requirements for acceptable course listings.

EARTH SCIENCE PRE-MAJOR
AA–DTA, AS–T 1: SCC/SFCC

Earth Science involves the investigation of planet Earth and its many systems. It includes the study of the solid Earth and the interrelations with Earth's atmosphere, hydrosphere, and biosphere. Earth scientists utilize foundational knowledge from chemistry, biology, and physics to identify and solve a wide array of problems associated with Earth's systems. Earth scientists research and study a variety of topics including traditional geology, geophysics and geodesy, soils, hydrology, oceanography, glaciology, meteorology, climatology and atmospheric chemistry. Finally, Earth scientists investigate the relationships of life and the biosphere to the various Earth systems.

Careers in the Earth Sciences are numerous and diverse. Earth Science majors can find employment opportunities in the public sector working for government agencies at the local, state, and federal levels. Earth scientists are also employed within the fields of engineering (private and public sectors) associated hazards mitigation and management, as well as the exploration, development, and management of resources (water, energy, minerals, timber, fisheries, and agriculture). Earth scientists successfully pursue careers in a variety of outdoor recreational fields as park rangers, interpretive guides, and naturalists. Finally, teaching at various levels is also a career option for students with undergraduate or graduate Earth Science degrees.

AA–DTA

Suggested Courses to Consider [1]	90
Total	**90**

90 credits are required for the AA–DTA

AS–T 1

Suggested Courses to Consider [1]	90
Total	**90**

90 credits are required for the AS–T 1

[1] Consult a counselor or academic adviser for recommended courses specific to student's choice of transfer institution.

ECONOMICS PRE-MAJOR
AA–DTA, Associate in Business DTA/MRP: SCC/SFCC

Economics is the study of how people efficiently satisfy their unlimited wants within the realistic context of scarce resources. This program introduces students to economic principles, which govern consumption, production, distribution and exchange in a capitalist market economy –the US, within the dynamics of modern day global forces.

Economics involves analytical training and quantitative reasoning which enables students to successfully evaluate complex real world situations, making this one of the most versatile bachelor's degrees to obtain, providing students with a solid framework to transfer to business programs, or pursue degrees in law, public policy or other social sciences.

AA–DTA

Suggested Courses to Consider [1]	90
Total	**90**

90 credits are required for the AA–DTA

Associate in Business DTA/MRP

Suggested Courses to Consider [1]	90
Total	**90**

90 credits are required for the Associate in Business DTA/MRP

[1] Consult a counselor or academic adviser for recommended courses specific to student's choice of transfer institution.

EDUCATION PARAPROFESSIONAL, SPECIAL EDUCATION
AAS, Certificate: SFCC

The Education Paraprofessional program provides theory and practice in the skills for working as effective members of instructional teams. An education paraprofessional works under the supervision of a licensed/certificated staff member to assist and support educational services. Courses within all options address the Washington State Core Competencies for Paraeducators and the Washington State Skill Standards. The core curriculum focuses on current issues and historical foundations of regular and special education, instructional strategies, behavior management, human development and interpersonal skills in the context of a diverse society. Students will need to successfully pass a Basic Skills Test in reading, writing and math before they will be able to register for Practicum I or complete the AAS degree. Supervised practicum opportunities for hands–on experiences in schools are provided throughout this course of study. The focus on Special Education includes the core curriculum courses described above yet delve deeper into providing services for children identified with disabilities such as learning disabilities, emotional and behavioral disorders, and developmental disabilities.

AAS Education Paraprofessional, **General Education**: The goal for this option is to support learners experiencing delays and/or those who are learning English as well as typical students within a general education setting.

AAS Education Paraprofessional, **Early Childhood**: Courses include the core curriculum described above and is intended to meet the needs of persons who wish to become paraeducators in grades K–3.

AAS Education Paraprofessional, **School Library Media Technician**: Courses include the core curriculum described above and is intended to meet the needs of persons who wish to become education paraprofessionals or school library technician paraprofessionals in a K–12 library. Library science (LMLIB) classes are taught online and students are required to take an onsite work experience class, LMLIB 267.

AA and DTA/MRP Degree: If you intend to transfer to a four year college or university to complete a teacher training program leading to certification, you must follow the associate of arts degree and the direct transfer agreement/major related program. It is important to contact an adviser in the Education Department for specific information about appropriate courses.

Certificate: This option may be most appropriate for those obtaining a degree in Early Childhood Education wishing to extend their knowledge of working with children with special needs. As of January 2002, new federal guidelines require most paraprofessionals in public K–12 schools to complete a two year program.

AAS
Education Paraprofessional, Special Education
First Quarter

EDUC&	204	Exceptional Child	5
ENGL&	101	English Composition I	5
		Math Related Instruction Requirement [1]	5
		Total	**15**

Second Quarter

EDUC&	202	Intro to Education	5
PSYC&	100	General Psychology	5
		Human Relations/Leadership Elective	5
		Total	**15**

Third Quarter

CMST	121	Job Communication Skills	2
ECED	190	Child Development [2]	5
HLTH	174	First Aid	3
HSGER	115	Multi-Cultural Perspectives in Human Services	5
		Total	**15**

Fourth Quarter

EDUC	252	Social/Emotional Development	5
EDUC	280	Behavior/Classroom Management	5
		Electives [3]	5
		Total	**15**

Fifth Quarter

EDUC	275	Learning Disabilities	5
EDUC	281	Education/Special Education Practicum I [5]	5
		Electives [3]	4
		Technology Elective [4]	3
		Total	**17**

Sixth Quarter

ASL&	121	Am Sign Language I	5
EDUC	270	Introduction to Developmental Disabilities	5
EDUC	282	Education/Special Education Practicum II	5
		Total	**15**

92 credits are required for the AAS

Human Relations/Leadership Elective

CMST	227	Intercultural Communication	5
HS	136	Improving Interpersonal Communication	5

Math Related Instruction Requirement

BUS	123	Practical Business Math Applications	5
MATH	090	Pre-Algebra	5

[1] May substitute any MATH course 90 or above.
[2] ECED 190 may be substituted with PSYC 210.
[3] This elective requirement may be met by any course or combination of courses numbered 100 or higher.
[4] Technology course needs to be from IS, CAPPS, GRDSN or other Internet related course.
[5] Prerequisite: Must successfully pass a Basic Skills Test. See the instructor prior to registration.

Early Childhood Education Option
First Quarter

EDUC&	204	Exceptional Child	5
ENGL&	101	English Composition I	5
		Math Related Instruction Requirement [1]	5
		Total	**15**

Second Quarter

EDUC&	202	Intro to Education	5
PSYC&	100	General Psychology	5
		Human Relations/Leadership Elective	5
		Total	**15**

Third Quarter

CMST	121	Job Communication Skills	2
ECED	190	Child Development [2]	5
HLTH	174	First Aid	3
HSGER	115	Multi-Cultural Perspectives in Human Services	5
		Total	**15**

Fourth Quarter

ECED	102	Observation and Documentation	2
ECED	103	College Success	3
EDUC	252	Social/Emotional Development	5
EDUC	280	Behavior/Classroom Management	5
		Total	**15**

Fifth Quarter

ECED	132	Fostering Social Competence	5
ECED	230	Learning Environments	5
EDUC	281	Education/Special Education Practicum I [3]	5
		Total	**15**

Sixth Quarter

ECED	124	Methods of Learning	5
ECED	254	Dynamics of Family Relationships	5
EDUC	282	Education/Special Education Practicum II	5
		Technology Elective [4]	2
		Total	**17**

92 credits are required for the AAS

Human Relations/Leadership Elective

CMST	227	Intercultural Communication	5
HS	136	Improving Interpersonal Communication	5

Math Related Instruction Requirement

BUS	123	Practical Business Math Applications	5
MATH	090	Pre-Algebra	5

[1] May substitute any MATH course 90 or above.
[2] ECED 190 may be substituted with PSYC 210.
[3] Prerequisite: Must successfully pass a Basic Skills Test. See the instructor prior to registration.
[4] Technology course needs to be from IS, CAPPS, GRDSN or other Internet related course.

General Education Option
First Quarter

EDUC&	204	Exceptional Child	5
ENGL&	101	English Composition I	5
		Math Related Instruction Requirement [1]	5
		Total	**15**

Second Quarter

EDUC&	202	Intro to Education	5
PSYC&	100	General Psychology	5
		Human Relations/Leadership Elective	5
		Total	**15**

Third Quarter

CMST	121	Job Communication Skills	2
ECED	190	Child Development [2]	5
HLTH	174	First Aid	3
HSGER	115	Multi-Cultural Perspectives in Human Services	5
		Total	**15**

Fourth Quarter

EDUC	252	Social/Emotional Development	5
EDUC	280	Behavior/Classroom Management	5
		Electives [3]	5
		Total	**15**

Fifth Quarter

CMST&	101	Introduction to Communication	5
EDUC	281	Education/Special Education Practicum I [4]	5
		Electives [3]	4
		Technology Elective [5]	3
		Total	**17**

Sixth Quarter

ECED	254	Dynamics of Family Relationships	5
EDUC	282	Education/Special Education Practicum II	5
		Electives [3]	3
		Total	**13**

90 credits are required for the AAS

Human Relations/Leadership Elective

CMST	227	Intercultural Communication	5
HS	136	Improving Interpersonal Communication	5

Math Related Instruction Requirement

BUS	123	Practical Business Math Applications	5
MATH	090	Pre-Algebra	5

[1] May substitute any MATH course 90 or above.
[2] ECED 190 may be substituted with PSYC 210.
[3] This elective requirement may be met by any course or combination of courses numbered 100 or higher.
[4] Prerequisite: Must successfully pass a Basic Skills Test. See the instructor prior to registration.
[5] Technology course needs to be from IS, CAPPS, GRDSN or other Internet related course.

School Library Media Technician Option

Library science (LMLIB) courses are offered once a year. Students may take LMLIB courses at any point in the cycle.

First Quarter

EDUC&	204	Exceptional Child	5
ENGL&	101	English Composition I	5
		Math Related Instruction Requirement [1]	5
		Total	**15**

Second Quarter

EDUC&	202	Intro to Education	5
PSYC&	100	General Psychology	5
		Human Relations/Leadership Elective	5
		Total	**15**

Third Quarter

ECED	190	Child Development [2]	5
HLTH	174	First Aid	3
HSGER	115	Multi-Cultural Perspectives in Human Services	5
LMLIB	280	Library Employment and Workplace Issues	3
		Total	**16**

Fourth Quarter

EDUC	252	Social/Emotional Development	5
EDUC	280	Behavior/Classroom Management	5
LMLIB	115	Introduction to Library Organizational Systems	5
		Total	**15**

Fifth Quarter

EDUC	281	Education/Special Education Practicum I [4]	5
LMLIB	125	School Libraries and Media Centers [2]	5
LMLIB	126	Library Technology and Services for Educational Support	3
LMLIB	220	Technical Services II: Cataloging [3]	5
		Total	**18**

Sixth Quarter

EDUC	282	Education/Special Education Practicum II	5
LMLIB	135	Children's Literature and Library Services	5
LMLIB	288	Cooperative Education Work Experience (No Seminar)	3
		Total	**13**

92 credits are required for the AAS

Human Relations/Leadership Elective

CMST	227	Intercultural Communication	5
HS	136	Improving Interpersonal Communication	5

Math Related Instruction Requirement

BUS	123	Practical Business Math Applications	5
MATH	090	Pre-Algebra	5

[1] May substitute any MATH course 90 or above.
[2] ECED 190 may be substituted with PSYC 210.
[3] LMLIB 116 may be substituted for LMLIB 220.
[4] Prerequisite: Must successfully pass a Basic Skills Test. See the instructor prior to registration.

Certificate

First Quarter

EDUC&	204	Exceptional Child	5
EDUC	252	Social/Emotional Development	5
EDUC	280	Behavior/Classroom Management	5
		Total	**15**

Second Quarter

EDUC	275	Learning Disabilities	5
ENGL&	101	English Composition I	5
HS	136	Improving Interpersonal Communication	5
		Total	**15**

Third Quarter

BUS	102	Math Skills for Business	3
EDUC	270	Introduction to Developmental Disabilities	5
HLTH	174	First Aid	3
		Certificate Electives	4
		Total	**15**

45 credits are required for the Certificate

Certificate Electives

ASL&	121	Am Sign Language I	5
CAPPS	102	Introduction to Office	1
CAPPS	104	Beginning Windows Operating System	1
ECED	101	Issues and Trends in Early Childhood Education	5
ECED	290	School-age Development	5
EDUC	206	Tutor Training	1
EDUC	207	Advanced Tutor Training	1
EDUC	208	Tutorial Practicum	1-2
EDUC	281	Education/Special Education Practicum I	5
EDUC	282	Education/Special Education Practicum II	5
HS	102	Introduction to Human Services	5
HS	105	Child Abuse	5

EDUCATION PRE-MAJOR: Associate in Elementary Education

Associate in Elementary Education DTA/MRP: SCC/SFCC

The Associate in Elementary Education DTA/MRP degree is an articulated transfer degree agreement for elementary education majors between the community college and most four–year institutions within the state of Washington. This degree shall only be granted to students who have earned a cumulative grade point average of at least 2.0. Students will enter the four–year institution at junior standing. Admission to Washington four–year institutions' schools of education is not guaranteed to students holding an Associate in Elementary Education DTA/MRP degree. **It is highly recommended that students meet with a counselor or an academic adviser** at Spokane Community College, Spokane Falls Community College or the Institute for Extended Learning on a regular basis to be sure that requirements specified in this degree are met. Students should also seek academic advising at the four–year institution to which they plan to transfer early in their educational planning to learn about additional requirements and procedures for

admission. To earn this degree, students must complete a minimum of 90 credits in courses numbered 100 or above. Courses must be chosen from the following distribution areas: communication –15 credits, quantitative reasoning –10 credits, humanities –15 credits, social sciences –25 credits, science –15 credits, health–related and physical education/recreational and leisure activities –5 credits, additional education courses –5–17 credits. **At least 5 credits must be W–designated (writing–intensive). At least 5 credits must be D–designated (global/diversity).** At least 30 credits must be earned from Spokane Community College or Spokane Falls Community College. At SFCC, all prior college–level credits and grade points are transferred for calculating total credits and GPA.

Use this program outline in conjunction with the degree worksheet which shows a full course listing for each distribution area. Consult a counselor or academic adviser for recommended courses specific to student's choice of transfer institution.

Associate in Elementary Education DTA/MRP
First Quarter

ENGL&	101	English Composition I	5
		Health-Related/PE/Recreational/ Leisure Course [1]	1
		Humanities Group A, B or C [2]	5
		Social Science Group A or B [1]	5
		Total	**16**

Second Quarter

ENGL&	102	Composition II	5
		Education Course Requirement [3]	5-7
		Health-Related/PE/Recreational/ Leisure Course [1]	1
		Science Group A or B [1]	5
		Total	**16–18**

Third Quarter

CMST&	101	Introduction to Communication	5
		Health-Related/PE/Recreational/ Leisure Course [1]	3
		Humanities Group A, B or C [1]	5
		US History	5
		Total	**18**

Fourth Quarter

	Math Series for Elementary Ed [4]	5
	Science Group A or B [1]	5
	Social Science Group A [1]	5
	Total	**15**

Fifth Quarter

	Math Series for Elementary Ed [4]	5
	Science Group A or B [1]	5
	Western Civilization or non-Western History	5
	Total	**15**

Sixth Quarter

	Humanities Group A, B or C [1]	5
	Math Series for Elementary Ed [4]	0-5
	Social Science Group A or B [1]	5
	Total	**10–15**

90-97 credits are required for the Associate in Elementary Education DTA/MRP

Education Course Requirement

EDUC&	202	Intro to Education [3]	5
EDUC&	204	Exceptional Child [3]	5
EDUC	267	Cooperative Education Work Experience [3]	2

Math Series for Elementary Ed

MATH	208	Mathematics for Elementary Education - A [4]	5
MATH	209	Mathematics for Elementary Education - B [4]	5
MATH	210	Mathematics for Elementary Education - C [4]	5
MATH	211	Mathematics for Elementary Education I	5
MATH	212	Mathematics for Elementary Education II [4]	5

US History

HIST&	136	US History 1	5
HIST&	137	US History 2	5

Western Civilization or non–Western History

HIST&	117	Western Civilization II	5
HIST&	118	Western Civilization III	5
HIST	141	History of China	5
HIST	142	History of Japan	5
HIST&	219	Native American History	5
HIST	230	Latin American History	5
HIST	240	History of Modern Middle East	5

[1] Refer to the Associate in Elementary Education degree worksheet for list of approved courses and credit requirements within each distribution area.
[2] Refer to the Associate in Elementary Education degree worksheet for list of approved courses and credit requirements within each distribution area. CMST 227 offered in Learning Community with ENGL& 101 at SFCC fills the Humanities Group A and ^D requirement.
[3] Student may select EDUC& 202 and EDUC 267 (7cr) at SCC, or EDUC& 202 (5cr) at SFCC. These courses are required for degree. EDUC& 204 recommended, but not required.
[4] Complete one series: MATH 208, 209 and 210 (15cr); or MATH 211 and 212 (10cr).

EDUCATION PRE-MAJOR: Associate in Mathematics Education
Associate in Mathematics Education DTA: SCC/SFCC

The Associate in Mathematics Education (DTA) degree is an articulated transfer degree agreement for future secondary mathematics teachers between the community colleges and most four–year institutions within the state of Washington. This degree shall only be granted to students who have earned a cumulative grade point average of at least 2.0. Students will enter the four–year institution at junior standing. Admission to Washington four–year institutions' schools of education is not guaranteed to students holding an Associate in Mathematics Education DTA degree. **It is highly recommended that students meet with a counselor or academic adviser** at Spokane Community College, Spokane Falls Community College or the Institute for Extended Learning on a regular basis to be sure that requirements specified in this degree are met. Students should also seek academic advising at the four–year institution to which they plan to transfer early in their educational planning to learn about additional requirements and procedures for admission. To earn this degree, students must complete a minimum of 90–92 credits in courses numbered 100 or above and meet specific distribution requirements. Courses must be chosen from the following specified distribution areas: communication –15 credits, quantitative reasoning –25 credits, humanities –15 credits, social sciences –15 credits, science –10 credits, health–related and physical education/recreational and leisure activities –5 credits, additional required courses –5–7 credits. **At least 5 credits must be W–designated (writing–intensive). At least 5 credits must be D–designated (global/diversity).** At least 30 credits must be earned from Spokane Community College or Spokane Falls Community College. At SFCC, all prior college–level and grade points are transferred for calculating total credits and GPA.

Use this program outline in conjunction with the degree worksheet which shows a full course listing for each distribution

area. Consult a counselor or academic adviser for recommended courses specific to student's choice of transfer institution.

Associate in Mathematics Education DTA

First Quarter

ENGL&	101	English Composition I	5
MATH&	151	Calculus I	5
PSYC&	100	General Psychology	5
		Total	**15**

Second Quarter

ENGL&	102	Composition II	5
MATH&	152	Calculus II	5
		Humanities Group A, B or C [1]	5
		Total	**15**

Third Quarter

CMST&	101	Introduction to Communication	5
MATH&	153	Calculus III	5
		Education Course Requirement [2]	5-7
		Total	**15–17**

Fourth Quarter

MATH	220	Elementary Linear Algebra [3]	5
		Science Elective [1]	5
		Social Sciences Group A or B [1]	5
		Total	**15**

Fifth Quarter

MATH&	254	Calculus IV	5
		Humanities Group A, B or C [1]	5
		Social Sciences Group B [1]	5
		Total	**15**

Sixth Quarter

		Health-Related/PE/Recreational/ Leisure Course [1]	5
		Humanities Group A, B or C [1]	5
		Science Elective (laboratory course) [1]	5
		Total	**15**

90-92 credits are required for the Associate in Mathematics Education DTA

Education Course Requirement

EDUC&	202	Intro to Education [2]	5
EDUC	267	Cooperative Education Work Experience [2]	2

[1] Refer to Associate in Mathematics Education degree worksheet for list of approved courses and credit requirements in each distribution area.

[2] Student may select EDUC& 202 and EDUC 267 (7cr) at SCC, or EDUC& 202 (5cr) at SFCC. These courses are required for degree. Additionally, EDUC& 204 is recommended.

[3] This course offered at SFCC only.

ELECTRICAL MAINTENANCE AND AUTOMATION AAS: SCC

Electrical maintenance and automation technicians are responsible for the maintenance, testing, repair, and/or replacement of the electrical systems and controls found in modern industrial plants and large commercial buildings.

As the electrical systems become more sophisticated, so must the skills of the electrical maintenance and automation technician. By mixing the theoretical with practical hands–on lab experiences using modern up–to–date industrial equipment and techniques, the student will be prepared for a challenging career in electrical maintenance.

Students are offered several options within the Electrical Maintenance and Automation program. They may choose to complete an AAS degree with specialized training in one of the following areas: Electrical Maintenance and Automation or Power Systems Maintenance. Electrical Trainee or Electrical Sales option certificates also are offered.

Students must maintain a 2.0 GPA in each course of the major discipline before advancing to the subsequent quarter. Students not meeting this minimum are required to repeat the deficient course before progressing.

Electrical maintenance and automation courses may be taken whenever they are offered and in any sequence as long as the student has fulfilled any prerequisites or has instructor permission. This plan allows a great deal of flexibility for retraining people in industry.

Potential students should possess a mechanical aptitude, good reading comprehension skills and the ability to pass a color blindness test.

AAS

Electrical Maintenance and Automation

First Quarter

APLED	121	Applied Written Communication [1]	4
ELMT	111	Electrical Math	5
ELMT	112	Electrical Theory	5
ELMT	113	Safety and Tools	4
ELMT	114	Materials and Fasteners	4
MET	103	Introduction to Computers for Technology	3
		Total	**25**

Second Quarter

ELMT	122	DC Circuits	5
ELMT	123	AC Theory	5
ELMT	124	Motor Maintenance	4
ELMT	262	Raceways	4
		Total	**18**

Third Quarter

APLED	123	Leadership Skills for Business and Industry	3
ELMT	131	Solid State	5
ELMT	132	DC Generators and Motors	4
ELMT	135	DC Motor Controls	4
ELMT	252	Transformers and Industrial Lighting	5
		Total	**21**

Fourth Quarter

APLED	125	Employment Preparation [1]	3
ELMT	133	AC Motors and Alternators	4
ELMT	134	Introduction to AC Controls	5
ELMT	241	AC Motor Controls	5
ELMT	251	National Electric Code	4
		Total	**21**

Fifth Quarter

ELMT	242	Advanced AC Controls	5
ELMT	243	Introduction to Programmable Controllers	4
ELMT	253	National Electric Code - Article 430	4
ELMT	254	Programmable Controller Applications	5
EMS	120	Basic First Aid in the Workplace	2
		Total	**20**

Sixth Quarter

ELMT	244	Solid State Motor Controls [2]	4
ELMT	263	Wiring Techniques [2]	4
ELMT	265	Advanced Programmable Controllers [2]	5
ELMT	268	Programmable Controller Integration [2]	5
		Total	**18**

123 credits are required for the AAS

[1] This related education requirement may be met by any course or combination of courses approved by the instructional dean.
[2] This course may be substituted with cooperative education (2 credits ELMT 266 and 16 credits ELMT 267) with department permission only. The cooperative education supervisor must approve the worksite chosen. These courses must be taken in the final quarter.

Power Systems Maintenance
Only students who have received prior approval from the Bonneville Power Administration are eligible for this degree option.

First Quarter

APLED	121	Applied Written Communication [1]	4
ELMT	111	Electrical Math	5
ELMT	112	Electrical Theory	5
ELMT	113	Safety and Tools	4
ELMT	114	Materials and Fasteners	4
MET	103	Introduction to Computers for Technology	3
		Total	**25**

Second Quarter

ELMT	122	DC Circuits	5
ELMT	123	AC Theory	5
ELMT	124	Motor Maintenance	4
ELMT	262	Raceways	4
		Total	**18**

Third Quarter

APLED	123	Leadership Skills for Business and Industry	3
ELMT	131	Solid State	5
ELMT	132	DC Generators and Motors	4
ELMT	135	DC Motor Controls	4
ELMT	252	Transformers and Industrial Lighting	5
		Total	**21**

Fourth Quarter

APLED	125	Employment Preparation [1]	3
ELMT	133	AC Motors and Alternators	4
ELMT	134	Introduction to AC Controls	5
ELMT	241	AC Motor Controls	5
ELMT	251	National Electric Code	4
		Total	**21**

Fifth Quarter

EMS	120	Basic First Aid in the Workplace	2
FLPT	271	Pneumatic Theory	5
FLPT	272	Pneumatic Math and Symbols	4
FLPT	273	Hydraulic Theory	5
FLPT	274	Applied Hydraulics	4
		Total	**20**

Sixth Quarter

		Cooperative Education Electives [2]	18
		Total	**18**

123 credits are required for the AAS

Cooperative Education Electives

ELMT	266	Cooperative Education Seminar [2]	2
ELMT	267	Cooperative Education Work Experience [2]	16
ELMT	288	Cooperative Education Work Experience (No Seminar) [2]	18

[1] This related education requirement may be met by any course or combination of courses approved by the instructional dean.
[2] The cooperative education supervisor must approve the worksite chosen. ELMT 266 and 267 must be taken concurrently.

ELECTRICAL TRAINEE
Certificate: SCC

The Electrical Trainee Certificate program has been designed to meet a large variety of student and electrical industry needs. The student will be required to take six of the Electrical Maintenance Technician (ELMT) core classes along with vocational–related courses. In addition to the core classes, the student may select the electrical sales option with the cooperative education work experience component or choose four additional courses from the ELMT list.

This selection will be made with the aid of professional/technical counselors, faculty or industry advisers to best meet the needs of the individual student. Students who complete the certificate requirements will be ready to seek employment as sales associates in the electrical industry or as electrical trainees and can continue to develop their electrical skills through on–the–job work experience. Students may enter the program whenever the courses are offered. It should be noted that some courses do have prerequisites. ELMT courses may be taken in any sequence providing the student has fulfilled any prerequisites or has instructor permission.

Certificate
First Quarter

APLED	121	Applied Written Communication [1]	4
ELMT	111	Electrical Math	5
ELMT	112	Electrical Theory	5
ELMT	114	Materials and Fasteners	4
		ELMT Course Elective(s) [2]	4
		Total	**22**

Second Quarter

ELMT	122	DC Circuits	5
ELMT	123	AC Theory	5
ELMT	262	Raceways	4
		ELMT Course Elective(s) [2]	4
		Total	**18**

Third Quarter

APLED	125	Employment Preparation [1]	3
		ELMT Course Elective(s) [3]	16-20
		Total	**19–23**

59-63 credits are required for the Certificate

[1] This related education requirement may be met by any course or combination of courses approved by the instructional dean.
[2] Choose one additional ELMT course.
[3] Choose four additional ELMT courses.

Electrical Sales Option
First Quarter

APLED	121	Applied Written Communication [1]	4
ELMT	111	Electrical Math	5
ELMT	112	Electrical Theory	5
ELMT	114	Materials and Fasteners	4
		ELMT Course Elective(s) [2]	4
		Total	**22**

Second Quarter

APLED	123	Leadership Skills for Business and Industry	3
ELMT	122	DC Circuits	5
ELMT	123	AC Theory	5
ELMT	262	Raceways	4
		ELMT Course Elective(s) [2]	4
		Total	**21**

Third Quarter

APLED	125	Employment Preparation [1]	3
		Cooperative Education Electives [3]	18
		Total	**21**

64 credits are required for the Certificate

Cooperative Education Electives

ELMT	266	Cooperative Education Seminar [3]	2
ELMT	267	Cooperative Education Work Experience [3]	16
ELMT	288	Cooperative Education Work Experience (No Seminar) [3]	18

[1] This related education requirement may be met by any course or combination of courses approved by the instructional dean.
[2] Choose one additional ELMT course.
[3] ELMT 266 and 267 must be taken concurrently.

ELECTRONICS ENGINEERING TECHNICIAN
AAS, Certificate: SCC

The electronics industry of today's highly technological world needs technicians prepared for the dynamic field of microcomputer–based electronic equipment maintenance. The program provides a seven–quarter, comprehensive curriculum to prepare the student to meet this need.

State–of–the art concepts are taught, as well as practical laboratory techniques, which provide the circuit analysis skills necessary for electronic technicians. Also included are studies in communication skills, computational skills and human relations skills.

Flexibility is provided to the student who chooses to receive a certificate of completion in electronics. This certificate is offered after successful completion of four specific quarters of electronics study and related courses.

The associate in applied science degree option is most advantageous in securing employment in the electronics industry. To qualify for this degree, the student must successfully complete specific electronic courses, as well as student–selected advanced electronic options for a total of seven quarters of study. The degree candidate also must successfully complete specific related courses.

The Society of Broadcast Engineers offers an add–on certificate to the Computer and Data Communications Technician AAS degree. To earn a certificate, students must take ELECT 266 and ELECT 267 during summer quarter prior to or immediately following the seventh quarter. Consult with the department chair for more details.

Prerequisites: Appropriate ASSET or COMPASS scores in math, reading and writing (or alternative courses) must be met before admission into the program is granted. Written permission of the department chair or the technical division dean may supersede requirements.

To qualify for this degree, the student must successfully complete specific electronics courses, as well as student–selected advanced electronics options for a total of seven quarters of study. The student must also successfully complete specific related courses. Successful completion will be determined by meeting the following criteria:

- A student must achieve an overall grade point average of 2.0 in all of the required electronics courses, student–selected advanced electronics options, and required specific related courses.
- A student must pass each of the classes during the first three quarters of the program with a minimum grade of 1.7
- A student must pass each of the classes during the fourth through seventh quarters with a minimum grade of 2.0

Note: upon review, the department chairperson and/or Technical Education Dean may waive any or all of the previous criteria when extenuating circumstances arise.

AAS
Avionics
First Quarter

ELECT	110	Computer Fundamentals for Electronics	2
ELECT	111	DC Circuits	7
ELECT	112	DC Circuit Lab	5
ELECT	113	DC/AC Circuit Math	5
		Total	**19**

Second Quarter

APLED	121	Applied Written Communication [1]	4
ELECT	121	AC Circuits	9
ELECT	122	AC Circuit Lab	5
ELECT	123	Advanced DC/AC Circuit Math	5
		Total	**23**

Third Quarter

ELECT	136	Solid State Devices/Circuits	5
ELECT	137	Solid State Devices/Circuits Lab	4
ELECT	138	Linear Devices/Circuits	5
ELECT	139	Linear Devices/Circuits Lab	4
		Total	**18**

Fourth Quarter

APLED	125	Employment Preparation [1]	3
ELECT	211	Digital Concepts	5
ELECT	212	Digital Concepts Lab	4
ELECT	213	Basic Computer Systems	5
ELECT	214	Basic Computer Systems Lab	4
		Total	**21**

Fifth Quarter

ELECT	221	Communication Fundamentals	5
ELECT	222	Communication Fundamentals Lab	4
ELECT	223	Advanced Computer Systems	5
ELECT	224	Advanced Computer Systems Lab	4
		Total	**18**

Sixth Quarter

ELECT	231	Advanced Communications	5
ELECT	232	Advanced Communications Lab	4
ELECT	278	RF Communications	5
ELECT	279	RF Communications Lab	4
		Total	**18**

Seventh Quarter

ELECT	245	Principles of Avionics	5
ELECT	246	Principles of Avionics Lab	4
ELECT	247	Avionics Systems	5
ELECT	248	Avionics Systems Lab	4
		Total	**18**

135 credits are required for the AAS

[1] This related education requirement may be met by any course or combination of courses approved by the department chair or the technical education division dean.

Computer and Data Communications Technician
First Quarter

ELECT	110	Computer Fundamentals for Electronics	2
ELECT	111	DC Circuits	7
ELECT	112	DC Circuit Lab	5
ELECT	113	DC/AC Circuit Math	5
		Total	**19**

Second Quarter

APLED	121	Applied Written Communication [1]	4
ELECT	121	AC Circuits	9
ELECT	122	AC Circuit Lab	5
ELECT	123	Advanced DC/AC Circuit Math	5
		Total	**23**

Third Quarter

ELECT	136	Solid State Devices/Circuits	5
ELECT	137	Solid State Devices/Circuits Lab	4
ELECT	138	Linear Devices/Circuits	5
ELECT	139	Linear Devices/Circuits Lab	4
		Total	**18**

Fourth Quarter

APLED	125	Employment Preparation [1]	3
ELECT	211	Digital Concepts	5
ELECT	212	Digital Concepts Lab	4
ELECT	213	Basic Computer Systems	5
ELECT	214	Basic Computer Systems Lab	4
		Total	**21**

Fifth Quarter

ELECT	221	Communication Fundamentals	5
ELECT	222	Communication Fundamentals Lab	4
ELECT	223	Advanced Computer Systems	5
ELECT	224	Advanced Computer Systems Lab	4
		Total	**18**

Sixth Quarter

ELECT	231	Advanced Communications	5
ELECT	232	Advanced Communications Lab	4
ELECT	278	RF Communications	5
ELECT	279	RF Communications Lab	4
		Total	**18**

Seventh Quarter

ELECT	255	Digital Data Communications	5
ELECT	256	Digital Data Communications Lab	4
ELECT	257	Wireless Communications	5
ELECT	258	Wireless Communications Lab	4
		Total	**18**

135 credits are required for the AAS

[1] This related education requirement may be met by any course or combination of courses approved by the department chair or the technical education division dean.

Electronics Maintenance Technician
First Quarter

ELECT	110	Computer Fundamentals for Electronics	2
ELECT	111	DC Circuits	7
ELECT	112	DC Circuit Lab	5
ELECT	113	DC/AC Circuit Math	5
		Total	**19**

Second Quarter

APLED	121	Applied Written Communication [1]	4
ELECT	121	AC Circuits	9
ELECT	122	AC Circuit Lab	5
ELECT	123	Advanced DC/AC Circuit Math	5
		Total	**23**

Third Quarter

ELECT	136	Solid State Devices/Circuits	5
ELECT	137	Solid State Devices/Circuits Lab	4
ELECT	138	Linear Devices/Circuits	5
ELECT	139	Linear Devices/Circuits Lab	4
		Total	**18**

Fourth Quarter

APLED	125	Employment Preparation [1]	3
ELECT	211	Digital Concepts	5
ELECT	212	Digital Concepts Lab	4
ELECT	213	Basic Computer Systems	5
ELECT	214	Basic Computer Systems Lab	4
		Total	**21**

Fifth Quarter

ELECT	221	Communication Fundamentals	5
ELECT	222	Communication Fundamentals Lab	4
ELECT	223	Advanced Computer Systems	5
ELECT	224	Advanced Computer Systems Lab	4
		Total	**18**

Sixth Quarter

		Electronics Maintenance Technician Electives [2]	18
		Total	**18**

Seventh Quarter

		Electronics Maintenance Technician Electives [2]	18
		Total	**18**

135 credits are required for the AAS

[1] This related education requirement may be met by any course or combination of courses approved by the department chair or the technical education division dean.

[2] Sixth quarter select 18 credits from electronics, electrical maintenance and automation, or hydraulic and pneumatic automation. Seventh quarter select 18 credits from electrical maintenance and automation, or hydraulic and pneumatic automation. May be substituted with any related course or combination of courses approved by the department chair or the technical education division dean.

Certificate
First Quarter

ELECT	110	Computer Fundamentals for Electronics	2
ELECT	111	DC Circuits	7
ELECT	112	DC Circuit Lab	5
ELECT	113	DC/AC Circuit Math	5
		Total	**19**

Second Quarter

APLED	121	Applied Written Communication [1]	4
ELECT	121	AC Circuits	9
ELECT	122	AC Circuit Lab	5
ELECT	123	Advanced DC/AC Circuit Math	5
		Total	**23**

Third Quarter

ELECT	136	Solid State Devices/Circuits	5
ELECT	137	Solid State Devices/Circuits Lab	4
ELECT	138	Linear Devices/Circuits	5
ELECT	139	Linear Devices/Circuits Lab	4
		Total	**18**

Fourth Quarter

APLED	125	Employment Preparation [1]	3
ELECT	211	Digital Concepts	5
ELECT	212	Digital Concepts Lab	4
ELECT	213	Basic Computer Systems	5
ELECT	214	Basic Computer Systems Lab	4
		Total	**21**

81 credits are required for the Certificate

[1] This related education requirement may be met by any course or combination of courses approved by the department chair or the technical education division dean.

EMERGENCY MEDICAL TECHNICIAN (PARAMEDIC)
AAS, Certificate: SCC

This program is for individuals that want to further their career in emergency medical services at the Paramedic level. Paramedics practice in the pre–hospital setting under somewhat autonomous conditions. They are governed by both standards of good clinical practice and standard written orders with the ever–present option for direct orders by qualified emergency physicians. As such, paramedics are expected to be excellent clinicians making decisions in a variety of patient presentations often based on a limited amount of information. Paramedics provide advanced clinical assessments and advanced interventions in trauma, cardiology, pulmonology, general medicine, pharmacology, general medicine, pharmacology, and other austere conditions.

The paramedic program at Spokane Community College meets or exceeds all standards for paramedic instruction set by the National Highway Transportation Safety Administration (NHTSA) and the Washington State Department of Health.

The paramedic program at Spokane College has maintained accreditation by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) through the Committee on Accreditation of Educational Programs for EMS Professionals (CoAEMSP) for the past 10 years. The program is currently on probationary status to review updates and changes to the program and anticipates returning to full status during subsequent review.

Following completion of the paramedic program students are eligible to sit for certification exams through the National Registry of Emergency Medical Technicians (NREMT) as well as state certifying authorities.

A 2.0 grade or better must be maintained in all classes.

Admission Requirements:

- Be 18 years of age prior to beginning the program
- Have earned a High School Diploma or GED
- Current American Heart Association CPR for HCP or equivalent
- Current EMT–Basic or EMT–Intermediate certification (a valid certificate must be presented prior to admission EMS 128 and EMS 129 satisfy this requirement)
- One year experience at the EMT Basic or EMT–Intermediate level (a letter of recommendation attesting to experience must be submitted prior to admission
- Appropriate scores in one of the following: ASSET or COMPASS
- Satisfy all prerequisite courses with a GPA of 2.0 or better

Important: to accommodate students seeking admission for fall 2010 ONLY, HED 108 and HED 109 will be accepted as the requirement for Anatomy and Physiology.

AAS

BIOL&	160	General Biology w/Lab [1]	5
BIOL&	241	Human A & P 1 [1]	5
BIOL&	242	Human A & P 2 [1]	5
CHEM&	110	Chemical Concepts w/Lab [2]	5
CMST&	210	Interpersonal Communication [2]	5
ENGL&	101	English Composition I [1]	5
MATH&	107	Math in Society [2]	5
PSYC&	100	General Psychology [2]	5
		Total	**40**

First Quarter

EMS	200	Introduction to Paramedicine	3
EMS	202	Medical Communication and Documentation	3
EMS	206	General Pharmacology	3
EMS	208	Patient Assessment	3
EMS	240	Paramedic Skills Lab I	2
PHARM	115	Mathematics for Pharmacy Technicians	3
		Total	**17**

Second Quarter

EMS	210	General Medicine I	3
EMS	212	General Cardiology	3
EMS	214	General Traumatology	3
EMS	242	Paramedic Skills Lab II	2
EMS	250	Paramedic Clinical I	4
		Total	**15**

Third Quarter

EMS	220	General Medicine II	3
EMS	222	Life Span Medicine	3
EMS	224	Paramedic Operations	3
EMS	244	Paramedic Skills Lab III	2
EMS	252	Paramedic Clinical II	4
		Total	**15**

Fourth Quarter

EMS	230	Special Topics In Paramedicine	3
EMS	260	Paramedic Internship I	5
EMS	262	Paramedic Internship II	5
		Total	**13**

100 credits are required for the AAS

[1] These courses are prerequisites and must be completed with a 2.0 grade or better prior to application for admission into the program. These courses are included in the total credits required for the certificate and degree.

[2] These courses must be completed with a 2.0 grade or better within a five–year period before or after the four quarter curriculum for graduation. Prerequisites for MATH& 107 are MATH 097,098 or 099 with a 2.0 or better within the last three years or appropriate placement score.

Certificate

BIOL&	160	General Biology w/Lab [1]	5
BIOL&	241	Human A & P 1 [1]	5
BIOL&	242	Human A & P 2 [1]	5
		Total	**15**

First Quarter

EMS	200	Introduction to Paramedicine	3
EMS	202	Medical Communication and Documentation	3
EMS	206	General Pharmacology	3
EMS	208	Patient Assessment	3
EMS	240	Paramedic Skills Lab I	2
PHARM	115	Mathematics for Pharmacy Technicians	3
		Total	**17**

Second Quarter

EMS	210	General Medicine I	3
EMS	212	General Cardiology	3
EMS	214	General Traumatology	3
EMS	242	Paramedic Skills Lab II	2
EMS	250	Paramedic Clinical I	4
ENGL	189	Writing for Vocational Students [2]	3
		Total	**18**

Third Quarter

CMST	127	Leadership Development	3
EMS	220	General Medicine II	3
EMS	222	Life Span Medicine	3
EMS	224	Paramedic Operations	3
EMS	244	Paramedic Skills Lab III	2
EMS	252	Paramedic Clinical II	4
		Total	**18**

Fourth Quarter

EMS	230	Special Topics In Paramedicine	3
EMS	260	Paramedic Internship I	5
EMS	262	Paramedic Internship II	5
		Total	**13**

81 credits are required for the Certificate

[1] These courses are prerequisites and must be completed with a 2.0 grade or better prior to application for admission into the program. These courses are included in the total credits required for the certificate and degree.
[2] ENGL 189 may be substituted with ENGL& 101.

ENGINEERING PRE-MAJOR
AS–T 2 – Bioengineering and Chemical pre–Engineering, AS–T 2 – Computer and Electrical pre–Engineering, AS–T 2 – Mechanical/Civil/Aeronautical/Industrial pre–Engineering: SFCC

Engineering is the profession in which knowledge of the mathematical and natural sciences, gained by study, experience and practice, is applied to economically use the materials and forces of nature for the benefit of society.

The two–year program at SFCC is intended to prepare the student for transfer to a four–year engineering college at the junior level. The following curriculum outline is designed to meet most lower–division requirements of various engineering disciplines and should be used as a guide to obtain an Associate of Science Transfer Track 2 (AS–T 2) degree in Engineering. This degree requires 5 writing intensive credits ("W") and a design component. The "W" requirement can be met in several courses and the design component can be met with various ENGR courses.

Individual consultation with an engineering adviser is strongly encouraged.

AS–T 2 – Bioengineering and Chemical pre–Engineering

First Quarter

CHEM&	161	General Chem: w/Lab I	5
ENGR	120	Introduction to Engineering Computation	2
MATH&	151	Calculus I	5
		Total	**12**

Second Quarter

CHEM&	162	General Chem w/ Lab II	5
ENGL&	101	English Composition I	5
MATH&	152	Calculus II	5
		Total	**15**

Third Quarter

CHEM&	163	General Chem w/ Lab III	5
ENGR	240	Applied Numerical Methods for Engineers	3
MATH&	153	Calculus III	5
		Total	**13**

Fourth Quarter

		Program Electives: Bioengineering/Chemical [1]	10
		Total	**10**

Fifth Quarter

CHEM&	241	Organic Chem I	3
CHEM&	251	Organic Chem Lab I	2
PHYS	201	Engineering Physics I	5
		Program Electives: Bioengineering/Chemical [1]	5
		Total	**15**

Sixth Quarter

CHEM&	242	Organic Chem II	3
CHEM&	252	Organic Chem Lab II	2
MATH&	254	Calculus IV	5
PHYS	202	Engineering Physics II	5
		Total	**15**

Seventh Quarter

MATH	274	Elementary Differential Equations	5
PHYS	203	Engineering Physics III	5
		Program Electives: Bioengineering/Chemical [1]	5
		Total	**15**

95 credits are required for the AS–T 2 – Bioengineering and Chemical pre–Engineering

Program Electives: Bioengineering/Chemical

BIOL&	222	Majors Cell/Molecular: w/Lab	5
CHEM&	243	Organic Chem III	3
CHEM&	253	Organic Chem Lab III	2
ENGL&	235	Technical Writing	5
ENGR	210	Electric Circuit Theory	5
MATH	220	Elementary Linear Algebra	5

Program Electives: Computer/Electrical

BIOL&	222	Majors Cell/Molecular: w/Lab [7]	5
ENGL&	235	Technical Writing [7]	5
ENGR	110	Engineering Problems and Orientation	3
ENGR	201	Statics [7]	5
ENGR	202	Dynamics	5

Program Electives: Mechanical/Civil/Aero/Indust

CHEM&	163	General Chem w/ Lab III	5
ENGL&	235	Technical Writing [8]	5
ENGR	110	Engineering Problems and Orientation	3
ENGR	111	Engineering Projects	2
ENGR	210	Electric Circuit Theory [8]	5

[1] The AS–T 2 requires 5cr of Social Science, 5cr of Humanities and 5cr from either Social Sciences or Humanities (a course in Macro Economics is recommended). The AS–T 2 also requires 10cr chosen from the Bioengineering/Chemical pre–Engineering elective list. Consultation with the engineering adviser is strongly recommended for major–related courses specific to student's choice of transfer institution and discipline exit code.
[2] The AS–T 2 requires 5cr of Social Science, 5cr of Humanities, and 5cr from either Social Sciences or the Humanities. The AS–T 2 also requires 10cr in engineering electives. Consultation with the engineering adviser is strongly recommended for major–related courses specific to student's choice of transfer institution and discipline exit code.
[3] Although two quarters of computer language are required for the AS–T 2, Gonzaga University requires CS& 141 only for Electrical Engineering, and Eastern Washington University requires CS 255 only for Electrical Engineering.
[4] Although required for the AS–T 2 degree, Gonzaga University does not require Math 220 (Linear Algebra) for Electrical or Computer Engineering, but requires ENGR 201 (Statics) for Electrical Engineering.
[5] Students should consult intended transfer institution for computer language requirements.
[6] Eastern Washington University does not require linear algebra for Mechanical Engineering.
[7] Two of the three courses (BIOL& 222, ENGL& 235, ENGR 201) are required for the AS–T 2.
[8] One of the two courses (ENGL& 235, ENGR 210) is required for the AS–T 2.

AS–T 2 – Computer and Electrical pre–Engineering

First Quarter

CHEM&	161	General Chem: w/Lab I	5
MATH&	151	Calculus I	5
		Program Electives: Computer/Electrical [2]	5
		Total	**15**

Second Quarter

CS&	141	Computer Science I Java [3]	5
ENGR	190	Electronic Logic	5
MATH&	152	Calculus II	5
		Total	**15**

Third Quarter

CS	142	Introduction to Computer Science II [3]	5
ENGL&	101	English Composition I	5
MATH&	153	Calculus III	5
		Program Electives: Computer/Electrical [2]	0-5
		Total	**15–20**

Fourth Quarter

		Program Electives: Computer/Electrical [2]	10
		Total	**10**

Fifth Quarter

ECON&	202	Macro Economics	5
MATH	220	Elementary Linear Algebra [4]	5
PHYS	201	Engineering Physics I	5
		Program Electives: Computer/Electrical [2]	0-5
		Total	**15–20**

Sixth Quarter

MATH&	254	Calculus IV	5
PHYS	202	Engineering Physics II	5
		Program Electives: Computer/Electrical [2]	5
		Total	**15**

Seventh Quarter

ENGR	210	Electric Circuit Theory	5
MATH	274	Elementary Differential Equations	5
PHYS	203	Engineering Physics III	5
		Total	**15**

100-110 credits are required for the AS–T 2 – Computer and Electrical pre–Engineering

Program Electives: Bioengineering/Chemical

BIOL&	222	Majors Cell/Molecular: w/Lab	5
CHEM&	243	Organic Chem III	3
CHEM&	253	Organic Chem Lab III	2
ENGL&	235	Technical Writing	5
ENGR	210	Electric Circuit Theory	5
MATH	220	Elementary Linear Algebra	5

Program Electives: Computer/Electrical

BIOL&	222	Majors Cell/Molecular: w/Lab [7]	5
ENGL&	235	Technical Writing [7]	5
ENGR	110	Engineering Problems and Orientation	3
ENGR	201	Statics [7]	5
ENGR	202	Dynamics	5

Program Electives: Mechanical/Civil/Aero/Indust

CHEM&	163	General Chem w/ Lab III	5
ENGL&	235	Technical Writing [8]	5
ENGR	110	Engineering Problems and Orientation	3
ENGR	111	Engineering Projects	2
ENGR	210	Electric Circuit Theory [8]	5

[1] The AS–T 2 requires 5cr of Social Science, 5cr of Humanities and 5cr from either Social Sciences or Humanities (a course in Macro Economics is recommended). The AS–T 2 also requires 10cr chosen from the Bioengineering/Chemical pre–Engineering elective list. Consultation with the engineering adviser is strongly recommended for major–related courses specific to student's choice of transfer institution and discipline exit code.

[2] The AS–T 2 requires 5cr of Social Science, 5cr of Humanities, and 5cr from from either Social Sciences or the Humanities. The AS–T 2 also requires 10cr in engineering electives. Consultation with the engineering adviser is strongly recommended for major–related courses specific to student's choice of transfer institution and discipline exit code.

[3] Although two quarters of computer language are required for the AS–T 2, Gonzaga University requires CS& 141 only for Electrical Engineering, and Eastern Washington University requires CS 255 only for Electrical Engineering.

[4] Although required for the AS–T 2 degree, Gonzaga University does not require Math 220 (Linear Algebra) for Electrical or Computer Engineering, but requires ENGR 201 (Statics) for Electrical Engineering.

[5] Students should consult intended transfer institution for computer language requirements.

[6] Eastern Washington University does not require linear algebra for Mechanical Engineering.

[7] Two of the three courses (BIOL& 222, ENGL& 235, ENGR 201) are required for the AS–T 2.

[8] One of the two courses (ENGL& 235, ENGR 210) is required for the AS–T 2.

AS–T 2 – Mechanical/Civil/Aeronautical/Industrial pre–Engineering

First Quarter

CHEM&	161	General Chem: w/Lab I	5
ENGR	120	Introduction to Engineering Computation	2
MATH&	151	Calculus I	5
		Total	**12**

Second Quarter

CHEM&	162	General Chem w/ Lab II	5
MATH&	152	Calculus II	5
		Program Electives: Mechanical/Civil/Aero/Indust [2]	5
		Total	**15**

Third Quarter

ENGR	103	Engineering Graphics/CAD	5
ENGR	240	Applied Numerical Methods for Engineers	3
MATH&	153	Calculus III	5
		Program Electives: Mechanical/Civil/Aero/Indust [2]	5
		Total	**18**

Fourth Quarter

ECON&	202	Macro Economics	5
ENGL&	101	English Composition I	5
		Program Electives: Mechanical/Civil/Aero/Indust [2]	5
		Total	**15**

Fifth Quarter

ENGR	201	Statics	5
MATH	220	Elementary Linear Algebra [6]	5
PHYS	201	Engineering Physics I	5
		Total	**15**

Sixth Quarter

ENGR	202	Dynamics	5
MATH&	254	Calculus IV	5
PHYS	202	Engineering Physics II	5
		Total	**15**

Seventh Quarter

ENGR	203	Mechanics of Materials	5
MATH	274	Elementary Differential Equations	5
PHYS	203	Engineering Physics III	5
		Program Electives: Mechanical/Civil/Aero/Indust [2]	0-5
		Total	**15–20**

105-110 credits are required for the AS–T 2 – Mechanical/ Civil/Aeronautical/Industrial pre–Engineering

Program Electives: Bioengineering/Chemical

BIOL&	222	Majors Cell/Molecular: w/Lab	5
CHEM&	243	Organic Chem III	3
CHEM&	253	Organic Chem Lab III	2
ENGL&	235	Technical Writing	5
ENGR	210	Electric Circuit Theory	5
MATH	220	Elementary Linear Algebra	5

Program Electives: Computer/Electrical

BIOL&	222	Majors Cell/Molecular: w/Lab [7]	5
ENGL&	235	Technical Writing [7]	5
ENGR	110	Engineering Problems and Orientation	3
ENGR	201	Statics [7]	5
ENGR	202	Dynamics	5

Program Electives: Mechanical/Civil/Aero/Indust

CHEM&	163	General Chem w/ Lab III	5
ENGL&	235	Technical Writing [8]	5
ENGR	110	Engineering Problems and Orientation	3
ENGR	111	Engineering Projects	2
ENGR	210	Electric Circuit Theory [8]	5

[1] The AS–T 2 requires 5cr of Social Science, 5cr of Humanities and 5cr from either Social Sciences or Humanities (a course in Macro Economics is recommended). The AS–T 2 also requires 10cr chosen from the Bioengineering/Chemical pre–Engineering elective list. Consultation with the engineering adviser is strongly recommended for major–related courses specific to student's choice of transfer institution and discipline exit code.

[2] The AS–T 2 requires 5cr of Social Science, 5cr of Humanities, and 5cr from either Social Sciences or the Humanities. The AS–T 2 also requires 10cr in engineering electives. Consultation with the engineering adviser is strongly recommended for major–related courses specific to student's choice of transfer institution and discipline exit code.

[3] Although two quarters of computer language are required for the AS–T 2, Gonzaga University requires CS& 141 only for Electrical Engineering, and Eastern Washington University requires CS 255 only for Electrical Engineering.

[4] Although required for the AS–T 2 degree, Gonzaga University does not require Math 220 (Linear Algebra) for Electrical or Computer Engineering, but requires ENGR 201 (Statics) for Electrical Engineering.

[5] Students should consult intended transfer institution for computer language requirements.

[6] Eastern Washington University does not require linear algebra for Mechanical Engineering.

[7] Two of the three courses (BIOL& 222, ENGL& 235, ENGR 201) are required for the AS–T 2.

[8] One of the two courses (ENGL& 235, ENGR 210) is required for the AS–T 2.

ENGLISH PRE-MAJOR
AA–DTA: SCC/SFCC

A major in English provides an excellent background for a wide variety of careers. The student should realize that a major or minor in English is considered desirable for such courses of study as pre–law, psychology, journalism, TV–radio, advertising, human relations, history, public relations, or teaching.

Students are provided with opportunities to improve their communication and critical skills. Writing courses provide practical experience in expository, creative and technical writing. The objective of all literature and humanities classes is to create an awareness and appreciation of the role of literature by examining and analyzing the historical, structural and artistic development of the works.

AA–DTA

	Suggested Courses to Consider [1]	90
	Total	**90**

90 credits are required for the AA–DTA

[1] Consult a counselor or academic adviser for recommended courses specific to student's choice of transfer institution.

EXPANDED FUNCTION DENTAL AUXILIARY
Certificate: SCC

A two–quarter program designed to prepare the student for employment as an Expanded Function Dental Auxiliary to the dentist. A third quarter is available for preparation of national and state examinations.

This program is designed for the dental assistant or dental hygienist who has graduated from a school that is accredited by the American Dental Association, Commission on Dental Accreditation (CODA) or has successfully completed the Dental Assisting National Board examination or a Licensed Dental Hygienist. The program will cover content that will prepare the student to pass both a written and a clinical examination to become a Washington State, Expanded Function Dental Auxiliary (EFDA). Students upon passing the examinations can seek licensure to become EFDAs.

The course will include the evaluation of the student's ability to perform identified skills under the dentist's general supervision to include: patient oral health instruction, coronal polishing, fluoride treatments, sealants, expose, process and mount dental radiographs, knowledge of dental morphology, pharmacology, emergencies, risk management as related to dental charting, health history alerts, and temporization.

Students will cover content which focuses on the didactic, laboratory and clinical components of the amalgam and composite curriculum to include: armamentarium including various matrices, classification of restorations, components of the prepared tooth; materials, composition of amalgam and composite materials, advantages and disadvantages, indications and contraindication; placement and finishing of composites, placement condensing and carving of amalgams; evaluation of restoration; and occulusal adjustment.

The course will cover content on the didactic and laboratory components of taking preliminary and final impressions and bite registrations to include computer assisted design and computer assisted manufacture applications.

Admission Recommended/Required:

- Dental Assisting National Board Current Certification Card and/or Certificate or Degree from a Dental Assisting or Dental Hygiene program that is accredited by the American Dental Association, Commission on Dental Accreditation (CODA).
- Computer skills recommended
- Active email account required

- Each required course for graduation must be completed with a 2.0 grade or better before proceeding to the next quarter.
- Students may repeat an advanced dental assisting course once, but it must be repeated within two years.

Certificate
First Quarter

DENT	141	EFDA Review Class	5
DENT	142	EFDA Review Lab	2
DENT	144	EFDA Amalgam Restorations	2
DENT	145	EFDA Amalgam Lab	4
DENT	148	EFDA Amalgam Clinical	3
		Total	**16**

Second Quarter

DENT	151	EFDA Composite Restorations	3
DENT	152	EFDA Composite Lab	4
DENT	154	EFDA Composite Clinical	3
DENT	155	EFDA Impressions/Provisional	3
DENT	158	EFDA Impressions/Provisional-Lab	2
DENT	160	EFDA Exam Preparation	3
		Total	**18**

34 credits are required for the Certificate

FIRE OFFICER
AAS: SCC

The Fire Officer program is designed to enhance the technical and general education of the volunteer and career firefighter. The program builds on the basic fire service information which allows the firefighter to gain the knowledge and understanding of information required for work at the officer level within the fire service. Students are given a good educational foundation which is coupled with a broad spectrum of technical information that will help them perform the duties of a fire officer within their jurisdiction. The degree is targeted to current firefighters or fire officers.

AAS

	Electives [1]	6-7
	First Year	50
	Second Year	26
	Work Based Learning Courses	15
	Total	**97–98**

97-98 credits are required for the AAS

Electives

FOD	205	Fire Investigation [1]	3
FOD	206	Fire Inspection and Codes [1]	4

First Year

CHEM&	110	Chemical Concepts w/Lab	5
CIS	110	Introduction to Computer Applications	5
CMST&	101	Introduction to Communication	5
CMST	227	Intercultural Communication	5
ENGL&	101	English Composition I	5
ENGL&	102	Composition II	5
MATH	201	Introduction to Finite Mathematics	5
PHYS	100	Introductory Physics	5
PSYC&	100	General Psychology	5
SOC&	101	Intro to Sociology	5

Second Year

FOD	101	Fire Officer IA	3
FOD	103	Fire Officer IB	3
FOD	110	Fire Service Leadership	3
FOD	131	Fire Service Instructor I	3
FOD	133	Fire Service Instructor II	3
FOD	140	Fire Service Incident Safety Officer	2
FOD	201	Fire Officer IIA	3
FOD	203	Fire Officer IIB	3
FOD	210	Incident Management-Multi-Company Operations	3

Work Based Learning Courses

FOD	102	Fire Officer IA Work Based Learning	3
FOD	104	Fire Officer IB Work Based Learning	3
FOD	132	Fire Service Instructor II Work Based Learning	3
FOD	202	Fire Officer IIA Work Based Learning	3
FOD	204	Fire Officer IIB Work Based Learning	3

[1] May be substituted with any course or combination of courses approved by the department chair.

FIRE SCIENCE TECHNOLOGY
AAS: SCC

The Fire Science Technology program is designed to prepare students for entry–level careers as firefighters for municipal, industrial, state and federal fire departments. The primary mission of the Fire Science Technology program is identification and mitigation of emergencies in order to preserve life and property.

A 2.0 grade or better must be maintained in all courses required for a degree.

Graduation Requirements:

- Emergency Medical Technician–Basic. EMT is a condition of graduation and must be obtained by the sixth quarter. This can be accomplished by taking EMS 128 and EMS 129 or by providing proof of completion from an outside agency. **EMT completion must be submitted with petition to graduate.**

AAS
First Quarter

ENGL&	101	English Composition I	5
FS	100	Orientation to Fire Science [1]	2
		Computer Elective	5
		Math Elective	5
		PE Elective [2]	1
		Total	**18**

Second Quarter

CMST&	101	Introduction to Communication	5
FS	152	Building Construction [3]	3
		PE Elective [2]	1
		Science Elective	5
		Total	**14**

Third Quarter

ENGL&	102	Composition II	5
FS	177	Wildland Fire Operations	3
		PE Elective [2]	1
		Science Elective	5
		Speech Elective	5
		Total	**19**

Fourth Quarter

FS	105	Principles of Hydraulics	4
FS	211	Introduction to Fire Science	4
FS	212	Fire Science Applications I	6
		PE Elective [2]	1
		Total	**15**

Fifth Quarter

FS	170	Hazardous Materials I	3
FS	221	Intermediate Fire Science	4
FS	222	Fire Science Applications II	6

FS	233	Professional Development	2
		PE Elective [2]	1
		Total	**16**

Sixth Quarter

FS	160	Fire Tactics	3
FS	231	Advanced Fire Science	4
FS	232	Fire Science Applications III	6
		PE Elective [2]	1
		Total	**14**

96 credits are required for the AAS

Computer Elective

CATT	120	Microsoft Word I	1-2.5
CATT	121	Microsoft Word II	1-2.5
CATT	122	Microsoft Access I	1-3
CATT	123	Microsoft Access II	1-2.5
CATT	138	Microsoft Excel I	1-2.5
CATT	139	Microsoft Excel II	2.5
CATT	190	Introduction to PowerPoint	1-2.5
CATT	191	Advanced PowerPoint	2.5
CIS	110	Introduction to Computer Applications	5

Math Elective

BUS	103	Basic Business Math and Electronic Calculators	5
MATH&	107	Math in Society [4]	5
MATH	201	Introduction to Finite Mathematics [5]	5

PE Elective

AQUAT	136	Aquatic Fitness	1
CJ	132	Criminal Justice Physical Training	1
CJ	133	Criminal Justice Physical Training	1
CJ	241	Criminal Justice Physical Training	1
CJ	242	Criminal Justice Physical Training	1
CJ	243	Criminal Justice Physical Training	1
PE	106	Yoga Fitness	1
PE	117	Kickboxing	1
PE	139	Weight Training	1
PE	185	Beginning Aerobic Fitness	1
PE	186	Fast Fitness, Beginning	1
PE	187	Cross Training	2
PE	206	Yoga Fitness	1
PE	217	Kickboxing	1
PE	239	Weight Training	1
PE	285	Advanced Aerobic Fitness	1
PE	286	Fast Fitness, Advanced	1
PE	287	Cross Training	2

Science Elective

CHEM&	110	Chemical Concepts w/Lab	5
CHEM	115	Environmental Chemistry w/Lab	5
PHYS	100	Introductory Physics	5

Speech Elective

CMST&	210	Interpersonal Communication	5
CMST	227	Intercultural Communication	5

[1] First year fire science students only. This course is offered fall quarter only.
[2] The same physical education course may be repeated up to six times.
[3] This course is offered winter quarter only.
[4] Math& 107 has a prerequisite of MATH 097 or MATH 099 with a 2.0 or better within the last three years or appropriate placement score.
[5] MATH 201 has a prerequisite of MATH 097 or MATH 099 with a 2.0 or better within the last three years or appropriate placement score. College level reading scores recommended.

FIRE SCIENCE TECHNOLOGY (AAS-T)
AAS–T: SCC

The Fire Science Technology program is designed to prepare students for entry–level careers as firefighters for municipal, industrial, state and federal fire departments. The primary mission of the Fire Science Technology program is identification and mitigation of emergencies in order to preserve life and property.

This AAS–T degree is transferable to some four–year institutions. Students interested in transfer should contact the SCC transfer office or the Fire Science program instructor for a list of four–year institutions that have agreed to accept this degree.

A 2.0 grade or better must be maintained in all courses required for a degree. EMT is a requirement by the end of the fifth quarter. This can be accomplished by taking EMS 128 and EMS 129 or by providing proof of completion from an outside agency.

AAS–T

First Quarter

CMST&	101	Introduction to Communication [1]	5
ENGL&	101	English Composition I [1]	5
FS	100	Orientation to Fire Science [2]	2
MATH&	107	Math in Society [3]	5
		PE Elective	1
		Total	**18**

Second Quarter

CHEM&	110	Chemical Concepts w/Lab	5
ENGL&	102	Composition II [1]	5
FS	152	Building Construction [4]	3
		Humanities Elective (Group B or C) [5]	5
		PE Elective	1
		Total	**19**

Third Quarter

CMST	227	Intercultural Communication [1]	5
FS	177	Wildland Fire Operations [4]	3
HLTH	101	Health and Wellness [6]	3
PHYS	100	Introductory Physics [1]	5
		PE Elective	1
		Total	**17**

Fourth Quarter

FS	105	Principles of Hydraulics	4
FS	211	Introduction to Fire Science	4
FS	212	Fire Science Applications I	6
FS	233	Professional Development	2
		Total	**16**

Fifth Quarter

FS	170	Hazardous Materials I [7]	3
FS	221	Intermediate Fire Science [7]	4
FS	222	Fire Science Applications II [7]	6
		Humanities Elective "W" (Group A, B or C) [5]	5
		Total	**18**

Sixth Quarter

FS	160	Fire Tactics	3
FS	231	Advanced Fire Science	4
FS	232	Fire Science Applications III	6
		PE Elective	3
		Total	**16**

104 credits are required for the AAS–T

PE Elective

AQUAT	136	Aquatic Fitness	1
CJ	132	Criminal Justice Physical Training	1
CJ	133	Criminal Justice Physical Training	1
CJ	241	Criminal Justice Physical Training	1
CJ	242	Criminal Justice Physical Training	1
CJ	243	Criminal Justice Physical Training	1
PE	106	Yoga Fitness	1
PE	117	Kickboxing	1
PE	139	Weight Training	1
PE	185	Beginning Aerobic Fitness	1
PE	186	Fast Fitness, Beginning	1
PE	187	Cross Training	2
PE	206	Yoga Fitness	1
PE	217	Kickboxing	1
PE	239	Weight Training	1
PE	285	Advanced Aerobic Fitness	1
PE	286	Fast Fitness, Advanced	1
PE	287	Cross Training	2

[1] This course may be substituted with any related course or combination of courses approved by the instructional dean.
[2] First year fire science students only. This course is offered in fall quarter only.
[3] MATH& 107 has a prerequisite of MATH 097 or MATH 099 with a 2.0 or better within the last three years or appropriate placement score.
[4] FS 152 is offered winter quarter only. FS 177 is offered spring quarter only.
[5] Refer to AA degree requirements.
[6] HLTH 101 may be substituted with HLTH 104.
[7] EMT is a requirement by the end of the fifth quarter.

FLORIST
AAS, Certificate: SCC

Degree: The Floral program provides a study of ornamental plant materials, plant propagation and design, identification and retail sales of cut flowers and potted plants. At the completion of the second year, the student may receive the associate in applied science degree.

Courses may be offered only in the quarter indicated. Outlined curriculum assumes students begin the program fall quarter and continue winter and spring quarters, with summer quarter off. It is recommended that students work closely with the program adviser or department chair when planning classes.

The floral certificate provides a study of floral arrangements techniques and retail sales methods of cut flowers and potted plants. Students must enter fall quarter in order to finish three quarters.

AAS

First Quarter

AGHRT	116	Green Industry Business Management	5
AGHRT	171	Agricultural Leadership Training	1
AGHRT	211	Floral Design Techniques	5
APLED	112	Applied Mathematics [1]	3
		Total	**14**

Second Quarter

AGHRT	105	Horticultural Retail Sales	3
AGHRT	111	House Plants	5
AGHRT	126	Computer Essentials for Environmental Sciences	2
AGHRT	212	Floral Design Applications	5
		Total	**15**

Third Quarter

AGGEN	151	Shop Skills	4
AGHRT	103	Introduction to Greenhouse and Nursery Production	3
AGHRT	173	Agricultural Leadership Training	1
AGHRT	213	Retail Floristry	5
APLED	121	Applied Written Communication [1]	4
		Total	**17**

Fourth Quarter

AGHRT	104	Principles of Pest Management	5
AGHRT	106	Greenhouse and Nursery Management I	5
AGHRT	195	Practicum [2]	3
ENVS	210	Environmental Soil Science	5
		Total	**18**

Fifth Quarter

AGHRT	107	Greenhouse and Nursery Management II	5
AGHRT	240	Practicum - Floral Design Projects 1	3
BUS	280	Human Relations in Business	5
ENVS	110	Plant Biology	5
		Total	**18**

Sixth Quarter

AGHRT	108	Greenhouse and Nursery Management III	4
AGHRT	230	Plant Problem Diagnosis	5
AGHRT	232	Pest Management Project	2
AGHRT	241	Practicum - Floral Design Projects 2	3
MMGT	205	Small Business Planning	5
		Total	**19**

101 credits are required for the AAS

[1] This related education requirement may be met by any course or combination of courses approved by the instructional dean.
[2] Practicum may be taken anytime during the second year

Certificate

First Quarter

AGHRT	116	Green Industry Business Management	5
AGHRT	171	Agricultural Leadership Training	1
AGHRT	211	Floral Design Techniques	5
APLED	112	Applied Mathematics [1]	3
		Total	**14**

Second Quarter

AGHRT	105	Horticultural Retail Sales	3
AGHRT	111	House Plants	5
AGHRT	126	Computer Essentials for Environmental Sciences	2
AGHRT	212	Floral Design Applications	5
		Total	**15**

Third Quarter

AGGEN	151	Shop Skills	4
AGHRT	103	Introduction to Greenhouse and Nursery Production	3
AGHRT	173	Agricultural Leadership Training	1
AGHRT	213	Retail Floristry	5
APLED	121	Applied Written Communication [1]	4
		Total	**17**

46 credits are required for the Certificate

[1] This related education requirement may be met by any course or combination of courses approved by the instructional dean.

FOREIGN LANGUAGE PRE-MAJOR
AA–DTA: SCC/SFCC

Knowledge of foreign languages makes possible direct contact with the literature and culture of other lands, contributing to international understanding. It is essential both from the standpoint of the traditionally recognized humanistic value and its central position in today's internationally oriented business and diplomatic world. Language offerings include: American

Sign Language, Chinese, French, Japanese (SFCC only), Salish and Spanish.

AA–DTA

Suggested Courses to Consider [1]	90
Total	**90**

90 credits are required for the AA–DTA

[1] Consult a counselor or academic adviser for recommended courses specific to student's choice of transfer institution.

FRONT OFFICE PROFESSIONAL
Certificate: SCC

The Front Office Professional program is a three–quarter program preparing students for entry–level positions. Students completing this program are prepared to greet callers, make and receive telephone calls in a professional way, format correspondence and reports, and perform a variety of duties depending on the office situations.

In order to earn a Front Office Professional certificate, a student must maintain a 2.0 GPA in all individual courses.

Certificate

First Quarter

BT	101	Keyboarding	5
BT	105	Basic Grammar for Business II	5
BT	151	Business Student Preparation	5
		Total	**15**

Second Quarter

BT	102	Document Processing [1]	5
BT	109	Business Communications	5
BUS	103	Basic Business Math and Electronic Calculators [2]	5
CATT	102	Introduction to Outlook	2.5
		Total	**17.5**

Third Quarter

BT	160	Job Preparation Techniques	3
BT	165	Word Processing	5
BT	231	Office Procedures	5
MMGT	223	Customer Service	3
		Total	**16**

48.5 credits are required for the Certificate

[1] Keyboarding proficiency of 30 wpm for three minutes with no more than six errors is a prerequisite for BT 102.
[2] BUS 103 may be substituted with BT 128.

GEOGRAPHY PRE-MAJOR
AA–DTA: SCC/SFCC

Geography is an all–encompassing discipline that seeks to understand the world –both its physical and its cultural features –through an understanding of place, location, and spatial relationships. It studies where things are and how they got there. Physical geographers may study weather and climate, water resources, the creation and evolution of landforms, or the distribution of plants, animals and soils. Cultural geographers focus on different aspects of how humans inhabit the earth. They may study the origin and spatial patterns of language groups, religions, ethnicities, agricultural practices or urban land use. Other geographers specialize in creating maps, which includes both traditional maps and computerized mapping known as Geographic Information Systems (GIS). The key skill of all geographers is the ability to geographically analyze the world around us: knowing not just where things are located, but "how" and "why."

AA–DTA

Suggested Courses to Consider [1]	90
Total	**90**

90 credits are required for the AA–DTA

[1] Consult a counselor or academic adviser for courses specific to student's choice of transfer institution.

GEOLOGY PRE-MAJOR
AA–DTA, AS–T 1: SCC/SFCC

Geology is the study of the Earth, its landforms, and formative processes. Geology involves both field–based and laboratory–based research and is one of the most interdisciplinary of the sciences because it involves virtually all of the scientific disciplines to understand and solve problems related to the Earth. Geologists study a wide variety of Earth features and processes from the identification of minerals and rocks to the processes of their formation. Geoscientists are also involved with mapping the earth utilizing a wide range of field and laboratory–based methods including remote sensing via satellites. Geologists are involved in the study of hazards associated with volcanism, earthquakes, flooding, and slope stability. Geologists work closely with engineers in the development of large construction projects as well as the environmental cleanup and remediation associated with various types of waste disposal. Geologists research Earth's ancient past including the evolution of the continents and oceans, life, the atmosphere and climate change. Finally, they study, explore, and manage a wide array of water, energy, and mineral resources that are critical to modern societies.

Career and employment opportunities for geologists are quite varied. A four–year graduate–level degree in geology can lead to careers in science education at the K–12 and collegiate levels as well as research in a variety of subdisciplines such as volcanology, marine geology, paleontology, seismology, tectonics, mineralogy, hydrology, soils, engineering geology, and geologic hazards. Earth science careers within industry include natural resource exploration and development (minerals and energy), and numerous options in the field of environmental assessment and remediation. Public agency positions for geoscientists range from local to city and county, to the state and federal levels. Students with geology degrees can go on to work in the fields of Parks and Outdoor Recreation as park rangers, guides, and interpretive professionals.

AA–DTA

Suggested Courses to Consider [1]	90
Total	**90**

90 credits are required for the AA–DTA

AS–T 1

Suggested Courses to Consider [1]	90
Total	**90**

90 credits are required for the AS–T 1

[1] Consult a counselor or academic adviser for recommended courses specific to student's choice of transfer institution.

GERONTOLOGY PARAPROFESSIONAL
AAS, Certificate: SFCC

Spokane Falls Community College offers a program designed to provide specific training to individuals who wish to establish a career in meeting the needs of a rapidly expanding older population. The Gerontology program examines mental, emotional, physical and social changes, which confront older adults. Gerontology is distinct from geriatrics, a medical specialty that explores health and disease in elders. Some of the current career fields may include program management, administration, recreation services, residential care, business and education fields and human service programs related to life after sixty.

An AAS degree and a certificate option are available. The associate in applied science degree prepares students for employment. The one–year certificate program is an option for those who have another degree and wish to increase their gerontology skills. Education in gerontology may be used as a support base for many helping professions. This area of study is also a resource for launching second and third careers.

AAS

First Quarter

HS	102	Introduction to Human Services	5
HS	136	Improving Interpersonal Communication	5
HSSUB	131	Survey of Chemical Dependency	3
		Approved Elective or any AS, HS, HSGER, HSSOC	5
		Total	**18**

Second Quarter

HS	105	Child Abuse	5
HSGER	101	Introduction to Social Gerontology	5
HSGER	250	Death, Loss and Grief	5
		Total	**15**

Third Quarter

ENGL&	101	English Composition I	5
		Multi-Cultural Perspectives or Aging Elective	5
		Social Policy or Treatment Theories Elective	5
		Total	**15**

Fourth Quarter

HS	281	Practicum I	5
HSGER	110	Leisure, Learning, and Living	5
		Math Elective [1]	5
		Total	**15**

Fifth Quarter

HS	282	Practicum II	5
HSGER	210	Aging and Mental Health	5
		Approved Elective or any AS, HS, HSGER, HSSOC	5
		Total	**15**

Sixth Quarter

HS	283	Practicum III	5
		Approved Elective or any AS, HS, HSGER, HSSOC	10
		Total	**15**

93 credits are required for the AAS

Approved Elective or any AS, HS, HSGER, HSSOC

BUS	100	Money Management	3
CAPPS	102	Introduction to Office	1
CMST	121	Job Communication Skills	2-5
ECED	100	Basic Child Care Training	2
EDUC	270	Introduction to Developmental Disabilities	5
FMT	112	Exercise and Aging	3
FMT	112	Special Considerations in Exercise	3
FMT	209	Exercise and the Cardiovascular System	5
FMT	209	Exercise and the Cardiovascular System	3
GENST	154	Introduction to Service Learning	2-5
HLTH	101	Health and Wellness	3
HLTH	174	First Aid	3
PSYC&	100	General Psychology	5
PSYC	210	Conception through Adolescent Developmental Psychology	5

Math Elective

BUS	102	Math Skills for Business	3
CMST	121	Job Communication Skills	2

Multi–Cultural Perspectives or Aging Elective

HSGER	115	Multi-Cultural Perspectives in Human Services	5
HSGER	201	Aging and Personality	5

Social Policy or Treatment Theories Elective

HS	115	Social Policy	5
HSSOC	115	Social Policy	5
HSSOC	221	Treatment Theories in Human Services	5

[1] Select BUS 102 and CMST 121 or other MATH course as approved by department chair.

Certificate

Students working toward a certificate of completion in gerontology must choose and complete a specified 30 credit sequence of courses and 10 credits of practicum in the gerontology program, consulting individually with a gerontology instructor before planning the total program.

BUS	102	Math Skills for Business	3
ENGL&	101	English Composition I	5
HS	136	Improving Interpersonal Communication	5
HS	281	Practicum I	5
HS	282	Practicum II	5
HSGER	101	Introduction to Social Gerontology	5
HSGER	110	Leisure, Learning, and Living	5
HSGER	115	Multi-Cultural Perspectives in Human Services	5
HSGER	201	Aging and Personality	5
HSGER	250	Death, Loss and Grief	5
		Total	**48**

48 credits are required for the Certificate

GRAPHIC DESIGN
AAS, Certificate: SFCC

The two–year Graphic Design program is an intensive course of study that prepares students for entry–level jobs in design studios, advertising agencies, corporate in–house design departments and other businesses creating design, advertising and promotional content. Standards match job requirements that range from technical production abilities to high–level creative conceptualizing. The program curriculum incorporates industry design problems and projects to demonstrate student learning. Courses in design process and technology interact to deliver the skills necessary to successfully complete specific design projects. The design skills students master are applied to projects in multiple media including print, online, video, animation, motion graphics, and social media platforms.

Guided by a local advisory committee of professional designers, the program is constantly updated with the goal of placing students in entry–level design jobs. Throughout the program, there is ample opportunity for students to interact with

professionals via field trips, guest lecturers, adjunct faculty and the Internet. At the end of the second year, students create professional portfolios of their work and complete internships at industry work sites.

AAS

Area of Emphasis: Students pursuing a degree in Graphic Design are encouraged to enhance their expertise through the study of related and/or complimentary disciplines: Fine Arts, Journalism, Photography, and Business. To encourage interdisciplinary study, the Graphic Design degree contains room in the second year for recommended courses within distinct "areas of emphasis." These courses are optional. Whatever a student's area of emphasis, his/her degree is in Graphic Design. To select the area of emphasis that will most enhance your skills, you should meet with your faculty adviser in Graphic Design early spring quarter of your first year.

First Quarter

GRDSN	101	Design Process I	4
GRDSN	102	Design Technology I	3
GRDSN	105	Drawing for Graphic Designers	3
GRDSN	156	Illustrator I	2
GRDSN	158	PhotoShop I	2
GRDSN	181	Web Development I	4
		Total	**18**

Second Quarter

GRDSN	111	Design Process II	4
GRDSN	112	Design Technology II	3
GRDSN	151	Typography and Layout	3
GRDSN	163	InDesign I	2
GRDSN	172	Dreamweaver	2
		Human Relations/Leadership Requirement[1]	5
		Total	**19**

Third Quarter

GRDSN	109	History of Design	5
GRDSN	121	Design Process III	4
GRDSN	122	Design Technology III	3
GRDSN	125	Computer Drawing	3
		Communications Requirement [1]	5
		Total	**20**

Fourth Quarter

GRDSN	182	Web Development II	3
GRDSN	201	Design Process IV	4
GRDSN	202	Design Technology IV	3
GRDSN	235	Multimedia Technology I	3
		Area of Emphasis [2]	0-5
		Total	**13–18**

Fifth Quarter

GRDSN	211	Design Process V	4
GRDSN	212	Design Technology V	3
GRDSN	236	Multimedia II	3
		Area of Emphasis [2]	0-5
		Computation Requirement [1]	5
		Total	**15–20**

Sixth Quarter

GRDSN	221	Design Process VI	4
GRDSN	223	Design Portfolio	3
GRDSN	237	Multimedia III	3
GRDSN	266	Cooperative Education Seminar	1
GRDSN	267	Cooperative Education Work Experience	3
		Area of Emphasis [2]	0-5
		Total	**14–19**

99-114 credits are required for the AAS

Area of Emphasis: Art

ART	105	Color and Design	5
ART	106	3-D Design	4
ART	130	Sculpture	4
ART	189	Printmaking	4
ART	191	Screen Printing	4
ART	192	Printmaking, Intaglio	4
GRDSN	129	Digital Studio	2
GRDSN	200	Graphic Design Workshop	2

Area of Emphasis: Business

GRDSN	200	Graphic Design Workshop	2
MMGT	125	Social Media Marketing	5
MMGT	126	Search Engine Marketing	5
MMGT	218	Fundamentals of Advertising	5

Area of Emphasis: Journalism

GRDSN	168	InDesign II	2
GRDSN	176	Introduction to Page Design	2
GRDSN	200	Graphic Design Workshop	2
JOURN	101	College Newspaper Production I	3-5
JOURN	220	Introduction to News Writing	5
JOURN	225	Multimedia Journalism	5
PHOTO	131	Introduction to Photojournalism	3

Area of Emphasis: Multimedia/Video

GRDSN	171	Flash	2
GRDSN	173	Flash II	2
GRDSN	175	After Effects Flash II	2
GRDSN	200	Graphic Design Workshop	2
GRDSN	236	Multimedia II	3
PHOTO	126	Digital Photography	5
PHOTO	200	Photography Media	4
PHOTO	237	Introduction to Documentary DV Production	5

Area of Emphasis: Photography

GRDSN	200	Graphic Design Workshop	2
PHOTO	112	Photographic Design	4
PHOTO	120	Photographic Arts	3
PHOTO	126	Digital Photography	5
PHOTO	131	Introduction to Photojournalism	3
PHOTO	200	Photography Media	4

Area of Emphasis: Web Design/Development

GRDSN	167	Fireworks	2
GRDSN	171	Flash	2
GRDSN	172	Dreamweaver	2
GRDSN	173	Flash II	2
GRDSN	174	Dreamweaver II	2
GRDSN	182	Web Development II	3
GRDSN	200	Graphic Design Workshop	2

Communications Requirement

CMST&	101	Introduction to Communication	5
CMST	226	Gender Communication	5
CMST	227	Intercultural Communication	5
ENGL&	101	English Composition I	5
ENGL	105	Pro/Tech: Basic Writing	5
JOURN	220	Introduction to News Writing	5
JOURN	225	Multimedia Journalism	5

Computation Requirement

BUS	103	Basic Business Math and Electronic Calculators	5
BUS	104	Business Mathematics	5
MATH	090	Pre-Algebra	5
MATH	093	Algebra I	5
MATH	094	Algebra II	5
MATH	098	Algebra III	5
MATH&	107	Math in Society	5

Human Relations/Leadership Requirement

CMST&	210	Interpersonal Communication	5
CMST	226	Gender Communication	5
CMST	227	Intercultural Communication	5
HS	136	Improving Interpersonal Communication	5
HUM	107	Introduction to Cultural Studies	5
MMGT	101	Principles of Management	5
SOC&	101	Intro to Sociology	5
SOC	221	Race and Ethnic Relations	5
SOC	230	Sociology of Gender	5

[1] Students must choose 5 credits in each of the following areas of related instruction: Communications, Computation and Human Relations/Leadership. A class cannot be used to fulfill more than one area. Students intending on transferring to another institution should consult with a faculty academic adviser prior to selecting these courses.

[2] Students are required to meet with a Graphic Design Instructor to develop a learning plan and determine an area of emphasis to complete the Graphic Design AAS Degree. Credits may vary by emphasis. At least 9 – 15 credits are recommended. Only one AAS Degree in Graphic Design will be awarded. Students desiring additional emphasis areas can receive non–transcripted certificates of completion.

[3] GRDSN 182 Web Development II may be substituted with GRDSN 142 Print Production.

Certificate

3–D Animation Certificate

This certificate is designed as an introduction to 3–D animation technologies and projects. The courses provide students with fundamental skills as they relate to 3–D animation. Students are assigned industry related projects and exercises.

ART	106	3-D Design	4
GRDSN	238	3-D Modeling and Animation I	3
GRDSN	239	3-D Modeling and Animation II	3
GRDSN	240	3-D Modeling and Animation III	3
PHOTO	126	Digital Photography	5
		Total	**18**

18 credits are required for the Certificate

Graphic Design Survey Certificate

This certificate is designed as an introduction to graphic design technologies and projects. The courses provide students with fundamental skills as they relate to graphic design and advertising. Students are assigned industry related projects and exercises.

GRDSN	101	Design Process I	4
GRDSN	102	Design Technology I	3
GRDSN	105	Drawing for Graphic Designers	3
GRDSN	109	History of Design	5
		Total	**15**

15 credits are required for the Certificate

Multimedia Certificate

This certificate is designed as an introduction to multimedia technologies and projects. The courses provide students with fundamental skills as they relate to multimedia and animation. Students are assigned industry related projects and exercises.

GRDSN	160	Director	2
GRDSN	171	Flash	2
GRDSN	235	Multimedia Technology I	3
GRDSN	236	Multimedia II	3
GRDSN	238	3-D Modeling and Animation I	3
GRDSN	239	3-D Modeling and Animation II	3
		Total	**16**

16 credits are required for the Certificate

Web Design Certificate

This certificate is designed as an introduction to web design technologies and projects. The courses provide students with fundamental skills as they relate to web design. Students are assigned industry related projects and exercises.

GRDSN	126	Web Production	2
GRDSN	158	PhotoShop I	2
GRDSN	167	Fireworks	2
GRDSN	172	Dreamweaver	2
GRDSN	235	Multimedia Technology I	3
GRDSN	236	Multimedia II	3
		Total	**14**

14 credits are required for the Certificate

GREENHOUSE-NURSERY
AAS, Certificate: SCC

The Greenhouse Nursery program provides a study of ornamental plant materials, plant propagation, greenhouse construction and nursery and greenhouse management methods.

At the completion of the second year, the student may receive the associate in applied science degree.

Courses may be offered only in the quarter indicated. Outlined curriculum assumes students begin the program fall quarter and continue winter and spring quarters, with summer quarter off. It is recommended that students work closely with the program adviser or department chair when planning classes.

AAS

First Quarter

AGGEN	151	Shop Skills [1]	4
AGHRT	103	Introduction to Greenhouse and Nursery Production [1]	3
AGHRT	110	Fall Landscape Plant Materials [1]	5
AGHRT	171	Agricultural Leadership Training [1]	1
APLED	121	Applied Written Communication [2]	4
		Total	**17**

Second Quarter

AGHRT	104	Principles of Pest Management [3]	5
AGHRT	111	House Plants [4]	5
AGHRT	116	Green Industry Business Management [4]	5
ENVS	210	Environmental Soil Science [3]	5
		Total	**20**

Third Quarter

AGHRT	105	Horticultural Retail Sales [3]	3
AGHRT	109	Introduction to Vegetable Gardening	2
AGHRT	112	Spring Landscape Plant Materials [3]	5
AGHRT	173	Agricultural Leadership Training [3]	1
ENVS	110	Plant Biology [4]	5
		Total	**16**

Fourth Quarter

AGHRT	106	Greenhouse and Nursery Management I [1]	5
AGHRT	115	Pruning	2
AGHRT	204	Landscape Design 1 [1]	4
AGHRT	211	Floral Design Techniques [1]	5
		Total	**16**

Fifth Quarter

AGHRT	107	Greenhouse and Nursery Management II [2]	5
AGHRT	202	Principles of Irrigation [2]	4
AGHRT	219	Soil Management and Fertility [2]	5
BUS	280	Human Relations in Business [2]	5
		Total	**19**

Sixth Quarter

AGHRT	108	Greenhouse and Nursery Management III [3]	4
AGHRT	195	Practicum [5]	2
AGHRT	230	Plant Problem Diagnosis [3]	5
AGHRT	232	Pest Management Project [3]	2
MMGT	205	Small Business Planning [3]	5
		Total	**18**

106 credits are required for the AAS

[1] Student may be asked to take AGHRT 104 in the fall quarter and AGGEN 151 in the winter quarter.
[2] This related education requirement may be met by any course or combination of courses approved by the instructional dean.
[3] These courses may be offered spring quarter only. Student may be asked to take ENVS 210 in the spring quarter and ENVS 110 in the winter quarter.
[4] These courses may be offered fall and winter quarter only.
[5] Practicum may be taken at any time during the second year.

Certificate
First Quarter

AGGEN	151	Shop Skills [1]	4
AGHRT	103	Introduction to Greenhouse and Nursery Production [1]	3
AGHRT	110	Fall Landscape Plant Materials [1]	5
AGHRT	171	Agricultural Leadership Training [1]	1
APLED	121	Applied Written Communication [2]	4
		Total	**17**

Second Quarter

AGHRT	104	Principles of Pest Management [3]	5
AGHRT	111	House Plants [4]	5
AGHRT	116	Green Industry Business Management [4]	5
ENVS	210	Environmental Soil Science [3]	5
		Total	**20**

Third Quarter

AGHRT	105	Horticultural Retail Sales [3]	3
AGHRT	109	Introduction to Vegetable Gardening	2
AGHRT	112	Spring Landscape Plant Materials [3]	5
AGHRT	173	Agricultural Leadership Training [3]	1
ENVS	110	Plant Biology [4]	5
		Total	**16**

53 credits are required for the Certificate

[1] Student may be asked to take AGHRT 104 in the fall quarter and AGGEN 151 in the winter quarter.
[2] This related education requirement may be met by any course or combination of courses approved by the instructional dean.
[3] These courses may be offered spring quarter only. Student may be asked to take ENVS 210 in the spring quarter and ENVS 110 in the winter quarter.
[4] These courses may be offered fall and winter quarter only.

HEALTH INFORMATICS
Certificate: SCC

The Health Informatics certificate program will provide the students with the skills necessary to reorganize the work of a health care provider to take full advantage of the features of health information technology in pursuit of meaningful use of health information technology to improve health and care. Utilizing the curriculum mandated by the office of National Coordinator for Health Information Technology (ONC), the Health Informatics students will be prepared to assist providers in implementing electronic health records to improve health care quality, safety, and cost–effectiveness.

Students entering this certificate program should have a background in either information technology and/or health care. Successful applicants will likely:

- have a minimum of 3 years recent experience in either health care or informational technology, **or**
- have recently successfully completed either a health care–related or information technology–related degree or certificate program,**or**
- in the case of a current health care or information technology student, be very close to completion of their program.

Certificate
First Quarter

HIIM	159	Health Care Terminologies, Vocabularies, and Classifications	4
HIIM	163	Theory and Application of Health Informatics	4
HIIM	164	Health Information Exchange and Workflow Analysis	4
HIIM	165	Quality Improvement in Health Informatics	2
HIIM	167	Health Informatics Usability	2
		Total	**16**

16 credits are required for the Certificate

HEALTH INFORMATION MANAGEMENT
AAS: SCC

This AAS degree program is accredited by the American Health Information Management Association (AHIMA) and the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM) and prepares students for employment in maintaining and processing health information in hospitals, nursing facilities, ambulatory care clinics and health insurance agencies. Training in a realistic work environment include managing computer databases, coding and abstracting clinical data, quality control management of information, health–related legal principles and policies, and knowledge of the Health Insurance Portability and Accountability Act (HIPAA) regulations. Upon completion of the program, students are eligible to take the Registered Health Information Technician (RHIT) certification exam offered by (AHIMA).

Each required course for graduation in the first year of the curriculum must be completed with a 2.0 grade or better before proceeding to the second year of the curriculum. A 2.0 grade or better must be maintained in all courses required for a degree. All HIM courses must be completed within five years.

Prerequisite/Admission Requirements:

- High School diploma or GED certificate
- Appropriate scores in one of the following: ASSET or COMPASS
- Keyboarding 30 WPM or BT 101

Students desiring a course of study leading to an associate of arts degree should consult the college catalog for the specific degree requirements. The AA degree is recommended for students who may consider continuing their education in health information management or administration.

AAS
First Quarter

BIOL&	160	General Biology w/Lab	5
HED	125	Medical Terminology	5
HIM	160	Computer Application in HIM	5
		Total	**15**

Second Quarter

BIOL&	241	Human A & P 1	5
HIM	103	HIM Theory and Practice	5
HIM	161	Health Management Information Systems [1]	3
		Total	**13**

Third Quarter

BIOL&	242	Human A & P 2	5
BT	109	Business Communications [2]	5
HIM	135	Comparative Health Records	4
HIM	162	Electronic Health Records	3
		Total	**17**

Fourth Quarter

BUS	103	Basic Business Math and Electronic Calculators [3]	5
HED	129	Pathophysiology	5
HIM	167	Current Issues in HIM	4
HIM	203	Clinical Practice [1]	1
HIM	212	Acute Care Coding	5
		Total	**20**

Fifth Quarter

HED	145	Pharmacology	3
HIM	105	Legal Concepts in Health [1]	3
HIM	209	Health Data Analysis and Display	5
HIM	211	Quality Improvement [1]	4
HIM	214	Ambulatory Care Coding	5
		Total	**20**

Sixth Quarter

HIM	213	Clinical Practice [1]	6
HIM	216	Reimbursement Strategies for HIM Professionals	5
HIM	218	Advanced Medical Coding	5
HIM	240	HIM Clinical Seminary [1]	2
		Total	**18**

103 credits are required for the AAS

[1] This related education requirement may be met by any course or combination of courses approved by the instructional dean.
[2] BT 109 may be substituted with ENGL& 235. Both BT 109 and ENGL& 235 contain course prerequisite requirements.
[3] BUS 103 may be substituted with BT 128.

HEALTH, PHYSICAL EDUCATION AND RECREATION PRE-MAJOR
AA–DTA: SCC/SFCC

The Physical Education department offers a wide variety of activity and professional courses which will allow two major program options:

- A pre–professional program in Health, Physical Education and Recreation which is aimed at meeting the needs of those students wishing to transfer to four–year institutions to complete requirements for bachelor degrees in physical education and recreation.
- Provide credit, non–credit and community service programs for all students wishing to secure instruction, formal practice and expertise in a variety of recreational, physical education and leisure time activities.

AA–DTA

		Suggested Courses to Consider [1]	90
		Total	**90**

90 credits are required for the AA–DTA

[1] Consult a counselor or academic adviser for recommended courses specific to student's choice of transfer institution.

HEALTH/FITNESS TECHNICIAN
AAS: SFCC

The Health/Fitness Technician program is a two–year professional technical curriculum offered at Spokane Falls Community College. This program is designed for students looking toward a career in the health/fitness industry. Students who complete the two–year program and receive an associate in applied science degree (AAS) can enter the job market immediately. Students interested in transferring to a four–year institution can utilize an articulation agreement with Eastern Washington University. This agreement allows students the option of transferring directly into the Exercise Science program at EWU.

Certification for fitness professionals, with its emphasis on safety, reliability and high standards, is required in most fitness facilities. The HFT program prepares students for several of the top rated accredited personal training certifications.

The HFT program provides instruction in professional areas such as exercise physiology, anatomical Kinesiology, sports nutrition, biomechanics, personal training, health screening, and exercise prescription. Related courses include stress management, first aid/ CPR and special considerations in exercise.

AAS
First Quarter

ENGL&	101	English Composition I	5
FMT	204	Health Appraisal and Exercise Prescription	5
HLTH	174	First Aid	3
		HFT Suggested Electives [1]	3
		Total	**16**

Second Quarter

BIOL&	160	General Biology w/Lab	5
CMST&	101	Introduction to Communication	5
FMT	106	Anatomical and Physiological Kinesiology	5
		Total	**15**

Third Quarter

BIOL&	241	Human A & P 1	5
FMT	111	Physiology of Exercise	5
FMT	115	Leadership Dynamics	3
		HFT Suggested Electives	3
		Total	**16**

Fourth Quarter

BIOL&	242	Human A & P 2	5
FMT	209	Exercise and the Cardiovascular System	3
FMT	235	Biomechanics	5
PE	187	Cross Training	2
		Total	**15**

Fifth Quarter

FMT	119	Principles of Strength Training	5
HLTH	104	Stress Management	3
MATH&	107	Math in Society	5
PE	270	Nutrition for Fitness	3
		Total	**16**

Sixth Quarter

FMT	112	Special Considerations in Exercise	3
FMT	225	Personal Training	5
PE	266	Cooperative Education Seminar	1
PE	267	Cooperative Education Work Experience	3
		Total	**12**

90 credits are required for the AAS

HFT Suggested Electives

ANTH&	100	Survey of Anthropology	5
BUS&	101	Intro to Business	5
FMT	219	Injury Prevention and Rehabilitation	5
HIST&	116	Western Civilization I	5

HLTH	101	Health and Wellness	3
PE	186	Fast Fitness, Beginning	1
PE	239	Weight Training	1
PE	286	Fast Fitness, Advanced	1
PE	287	Cross Training	2
PSYC&	100	General Psychology	5
SBM	101	How to Start a Small Business	5
SOC&	101	Intro to Sociology	5

[1] HFT students have the flexibility of taking most courses offered at SFCC for their electives. However, students are asked to get approval from the HFT adviser prior to scheduling any electives.

[2] Students planning to transfer to a four year institution should meet with their adviser to review the catalog and/or transfer manual of the school to which they plan to transfer before selecting courses.

HEARING INSTRUMENT SPECIALIST
AAS, Certificate: SFCC

Spokane Falls Community College offers a two–year program to prepare hearing instrument specialists for immediate employment in hearing health care establishments. The program includes study in physiology and anatomy, social science and technical hearing instrument courses. The Hearing Instrument Specialist program is primarily an online low residency program, meaning students complete coursework online with occasional meetings on–campus to verify skills and competencies.

Hearing instrument specialists find a variety of professional experiences available to them, including independent contracted employment, professional consulting, establishment ownership and technical support of related professions. After successful completion of the program, all educational requirements of the state (Washington State Department of Health) will have been satisfied, pursuant to state licensing as a duly authorized “Hearing Instrument Fitter/Dispenser.”

Non–Local Students: Students who reside in Spokane have weekly on–campus labs. Students who live outside of the Spokane area work with mentors who are licensed hearing instrument dispensers. These mentors assist the students in weekly lab activities. Close communication between the mentor, student and faculty is important in order for a student to succeed in this challenging program.

Admission Requirements:

- Out of state students please refer to the tuition of "non–resident with waiver" section of web catalog.
- Ability to attend six on campus three–day sessions.
- Student must have secured a mentoring site if unable to make daily commute to college.
- Completion of HIS enrollment packet found at www.spokanefalls.edu/his

AAS

First Quarter

ENGL&	101	English Composition I [1]	5
HIS	101	Basic Hearing Instrument Sciences	4
HIS	104	Hearing Physiology and Anatomy	4
HIS	106	Healthcare and Business Ethics	4
		Total	**17**

Second Quarter

HIS	123	Basic Audiometrics	5
HIS	125	Auditory Disorders	4
HIS	127	Hearing Healthcare Management I	4
		Computation Related Instruction Requirement [1]	5
		Total	**18**

Third Quarter

HIS	134	Advanced Audiometrics	5
HIS	136	Hearing Instrument Technologies	4
HIS	138	Ear Couplers and Assistive Technologies	5
		Human Relations/Leadership Related Instruction [1]	5
		Total	**19**

Fourth Quarter

HIS	201	Hearing Healthcare Management II	4
HIS	206	Hearing Instrument Specialist Laboratory I	4
HIS	250	Perspectives on Disabilities	4
		Total	**12**

Fifth Quarter

HIS	210	Clinical Methods I	5
HIS	213	Marketing/Sales	4
HIS	215	Hearing Instrument Specialist Laboratory II	5
		Total	**14**

Sixth Quarter

HIS	205	Introduction to Speech-Language Pathology and Audiology	5
HIS	222	Clinical Methods II	6
HIS	266	Cooperative Education Seminar	1
HIS	267	Cooperative Education Work Experience	5
		Total	**17**

97 credits are required for the AAS

Computation Related Instruction Requirement

BUS	103	Basic Business Math and Electronic Calculators	5
BUS	123	Practical Business Math Applications	5
MATH	100	Vocational Technical Mathematics	5
MATH&	107	Math in Society	5

Human Relations/Leadership Related Instruction

BUS	280	Human Relations in Business	5
HS	136	Improving Interpersonal Communication	5

[1] Must choose 5 credits in each of the following areas of related instruction: Communications, Computation and Human Relations/Leadership. A class cannot be used to fulfill more than one area. Students intending on transferring to another institution should consult with a faculty academic adviser prior to selecting these courses.

Certificate

First Quarter

HIS	101	Basic Hearing Instrument Sciences	4
HIS	104	Hearing Physiology and Anatomy	4
HIS	106	Healthcare and Business Ethics	4
		Total	**12**

Second Quarter

HIS	123	Basic Audiometrics	5
HIS	125	Auditory Disorders	4
HIS	127	Hearing Healthcare Management I	4
HIS	213	Marketing/Sales	4
		Total	**17**

Third Quarter

HIS	134	Advanced Audiometrics	5
HIS	138	Ear Couplers and Assistive Technologies	5
HIS	266	Cooperative Education Seminar	1
HIS	267	Cooperative Education Work Experience	3
		Total	**14**

43 credits are required for the Certificate

HEATING, VENTILATION, AIR CONDITIONING AND REFRIGERATION
AAS: SCC

Completion of the two–year Heating, Ventilation, Air Conditioning and Refrigeration (HVAC/R) program at Spokane Community College prepares the student for an entry–level position in one of the most challenging occupations available.

Entry–level HVAC/R technicians typically work on residential and light commercial systems performing equipment installations, preventative maintenance, and service and repair functions. Opportunities also are available in systems design and sales.

Areas of study include basic HVAC/R systems, electricity, heating, local gas and oil codes, load calculations, cooling, refrigeration, duct design, and troubleshooting. These skills are taught from lab applications coordinated with classroom theory and actual jobsite experience.

AAS

First Quarter

AIRC	113	Math for HVAC Technicians	5
AIRC	114	Principles of Electricity	8
AIRC	117	Theory of Heat Transfer	4
		Total	**17**

Second Quarter

AIRC	115	HVAC Electrical Applications	7
AIRC	128	Fundamentals of Heating and Mechanical Systems	8
APLED	121	Applied Written Communication	4
APLED	125	Employment Preparation	3

Third Quarter

AIRC	137	Heating Systems Servicing and Troubleshooting	7
AIRC	201	Refrigeration Fundamentals	8
EMS	120	Basic First Aid in the Workplace	2
		Total	**17**

Fourth Quarter

AIRC	202	Thermodynamics of Refrigeration [1]	8
AIRC	263	System Servicing and Troubleshooting of Air Conditioners [1]	7
		Total	**15**

Fifth Quarter

AIRC	125	Sheet Metal Layout and Fabrication	5
AIRC	246	HVAC Load Calculations	4
AIRC	247	Oil Heating Systems	4
AIRC	249	Hydronic Heating Systems	7
		Total	**20**

Sixth Quarter

AIRC	255	Installation Practices	7
AIRC	264	System Servicing and Troubleshooting of Heat Pumps	7
		Total	**14**

Seventh Quarter

AIRC	262	Control Theory and Automation	7
AIRC	265	Direct Digital Control Systems	8
		Total	**15**

98 credits are required for the AAS

[1] The fourth quarter is held summer quarter.

HISTORY PRE-MAJOR
AA–DTA: SCC/SFCC

History is the branch of knowledge that deals systematically with the past–recording, analyzing, coordinating and explaining past events. It develops critical awareness of how we have become what we are and sharpens our vision of what we can become.

AA–DTA

Suggested Courses to Consider [1]	90
Total	**90**

90 credits are required for the AA–DTA

[1] Consult a counselor or academic adviser for recommended courses specific to student's choice of transfer institution.

HORTICULTURE PRE-MAJOR
AA–DTA: SCC

The field of environmental horticulture pertains to floriculture, landscape design and maintenance, and greenhouse management.

AA–DTA

Suggested Courses to Consider [1]	90
Total	**90**

90 credits are required for the AA–DTA

[1] Consult a counselor or academic adviser for recommended courses specific to student's choice of transfer institution.

HOTEL AND RESTAURANT MANAGEMENT
AAS, Certificate: SCC

The Hotel and Restaurant Management program is a two–year course of study designed to develop qualified students in the organization and operation of hotels, motels and restaurants. Emphasis is placed on all aspects of food and beverage services including the operation of large and small restaurants and commercial/industrial food service programs; the management of such lodging facilities as all suite properties, hotels, resorts, private clubs, and bed and breakfast operations; and the study of travel and tourism and its impact on the hotel/restaurant industry.

The training provided by the Hotel and Restaurant Management program prepares students for entry into the fastest growing industry in the United States today. Individuals seeking a secure future in an exciting field should consider enrolling in the hotel and restaurant management program. A Restaurant Management option is available for students seeking career opportunities specifically in the restaurant field.

Three Resort option certificates are offered for students seeking career opportunities in the resort field. The Resort Food & Beverage certificate will prepare a student for a career in the food and beverage industry; students learn about all different levels of service and types of food and beverage operations that are within hotels and resorts. Students will study the national sanitation standards, how to maintain food and beverage costs, as well as, develop menu planning skills.

The Resort Lodging certificate will prepare students in all aspects that are involved with the rooms division of a hotel and resort, front desk systems and housekeeping operations. The student will learn customer services and marketing techniques that are also associated with hotels and resorts.

The Resort Management certificate program will educate students on entry–level management positions and skills needed in hotels and resorts. The student will learn about the systems, and management techniques needed to be successful managers in the hospitality industry. Successful managers in the industry require interpersonal skills and the ability to understand all aspects of the working relationships between multiple–departments within full–service hotels and resorts.

Students must complete all courses with a 2.0 grade or better before advancing to subsequent quarters.

AAS
Hotel and Restaurant Management
First Quarter

CIS	105	Computer Fundamentals for Vocations I	3
HM	110	Introduction to Hospitality	5
HM	112	Hospitality Mathematics [1]	3
HM	115	Food Sanitation [2]	3
		Total	**14**

Second Quarter

BT	105	Basic Grammar for Business II [3]	5
HM	126	Food Science	5
HM	160	Supervisory Housekeeping	3
MMGT	223	Customer Service	3
		Total	**16**

Third Quarter

BT	160	Job Preparation Techniques	3
BUS	140	International Marketing	3
EMS	120	Basic First Aid in the Workplace	2
HM	130	Human Relations [4]	5
HM	141	Maintenance and Engineering	4
		Total	**17**

Fourth Quarter

ACCT	151	College Accounting I	5
HM	220	Tourism and the Hospitality Industry	3
HM	265	Hospitality Cost Controls	5
HM	288	Cooperative Education Work Experience (No Seminar)	3
		Total	**16**

Fifth Quarter

CMST	227	Intercultural Communication	5
HM	205	Hotel/Restaurant Law	5
HM	232	Hotel/Restaurant Management Principles [5]	5
		Total	**15**

Sixth Quarter

HM	202	Front Office Procedures	4
HM	208	Hotel Sales and Marketing	2
HM	251	Restaurant Management	5
MMGT	231	Human Resource Management	5
		Total	**16**

94 credits are required for the AAS

[1] HM 112 may be substituted with BUS 103.
[2] This course is required for certification by the Educational Foundation of the National Restaurant Association.
[3] BT 105 may be substituted with BT 109.
[4] HM 130 may be substituted with BUS 280.
[5] HM 232 may be substituted with MMGT 101.

Restaurant Management Option
First Quarter

CIS	105	Computer Fundamentals for Vocations I	3
HM	110	Introduction to Hospitality	5
HM	112	Hospitality Mathematics [1]	3
HM	115	Food Sanitation [2]	3
		Total	**14**

Second Quarter

BT	105	Basic Grammar for Business II [3]	5
HM	126	Food Science	5
MMGT	223	Customer Service	3
		Total	**13**

Third Quarter

BT	160	Job Preparation Techniques	3
BUS	140	International Marketing	3
EMS	120	Basic First Aid in the Workplace	2
HM	130	Human Relations [4]	5
HM	141	Maintenance and Engineering	4
		Total	**17**

Fourth Quarter

ACCT	151	College Accounting I	5
HM	220	Tourism and the Hospitality Industry	3
HM	265	Hospitality Cost Controls	5
HM	288	Cooperative Education Work Experience (No Seminar)	3
		Total	**16**

Fifth Quarter

CMST	227	Intercultural Communication	5
HM	205	Hotel/Restaurant Law	5
HM	232	Hotel/Restaurant Management Principles [5]	5
HM	255	Menu Planning	3
		Total	**18**

Sixth Quarter

HM	208	Hotel Sales and Marketing	2
HM	251	Restaurant Management	5
MMGT	231	Human Resource Management	5
		Total	**12**

90 credits are required for the AAS

[1] HM 112 may be substituted with BUS 103.
[2] This course is required for certification by the Educational Foundation of the National Restaurant Association.
[3] BT 105 may be substituted with BT 109.
[4] HM 130 may be substituted with BUS 280.
[5] HM 232 may be substituted with MMGT 101.

Certificate
Resort Food and Beverage Certificate
First Quarter

BT	151	Business Student Preparation	5
HM	110	Introduction to Hospitality	5
HM	130	Human Relations [1]	5
		Total	**15**

Second Quarter

BT	105	Basic Grammar for Business II [2]	5
HM	115	Food Sanitation [3]	3
HM	126	Food Science	5
		Total	**13**

Third Quarter

CMST	227	Intercultural Communication	5
HM	112	Hospitality Mathematics [4]	3
HM	251	Restaurant Management	5
MMGT	223	Customer Service	3
		Total	**16**

Fourth Quarter

BUS	140	International Marketing	3
EMS	120	Basic First Aid in the Workplace	2
HM	255	Menu Planning	3
HM	265	Hospitality Cost Controls	5
		Total	**13**

57 credits are required for the Certificate

[1] HM 130 may be substituted with BUS 280.
[2] BT 105 may be substituted with BT 109.
[3] This course is required for certification by the Educational Foundation of the National Restaurant Association.
[4] HM 112 may be substituted with BUS 103.

Resort Lodging Certificate

First Quarter

BT	151	Business Student Preparation	5
HM	110	Introduction to Hospitality	5
HM	112	Hospitality Mathematics [1]	3
		Total	**13**

Second Quarter

BT	105	Basic Grammar for Business II [2]	5
HM	130	Human Relations [3]	5
HM	160	Supervisory Housekeeping	3
		Total	**13**

Third Quarter

BUS	140	International Marketing	3
HM	141	Maintenance and Engineering	4
HM	202	Front Office Procedures	4
MMGT	223	Customer Service	3
		Total	**14**

Fourth Quarter

CMST	227	Intercultural Communication	5
HM	208	Hotel Sales and Marketing	2
HM	265	Hospitality Cost Controls	5
		Total	**12**

52 credits are required for the Certificate

[1] HM 112 may be substituted with BUS 103.
[2] BT 105 may be substituted with BT 109.
[3] HM 130 may be substituted with BUS 280.

Resort Management Certificate

First Quarter

BT	151	Business Student Preparation	5
HM	110	Introduction to Hospitality	5
HM	112	Hospitality Mathematics [1]	3
HM	220	Tourism and the Hospitality Industry	3
		Total	**16**

Second Quarter

ACCT	151	College Accounting I	5
BT	105	Basic Grammar for Business II [2]	5
HM	130	Human Relations [3]	5
		Total	**15**

Third Quarter

CATT	138	Microsoft Excel I	2.5
CMST	227	Intercultural Communication	5
HM	205	Hotel/Restaurant Law	5
MMGT	223	Customer Service	3
		Total	**15.5**

Fourth Quarter

EMS	120	Basic First Aid in the Workplace	2
HM	232	Hotel/Restaurant Management Principles[4]	5
MMGT	231	Human Resource Management	5
		Total	**12**

58.5 credits are required for the Certificate

[1] HM 112 may be substituted with BUS 103.
[2] BT 105 may be substituted with BT 109.
[3] HM 130 may be substituted with BUS 280.
[4] HM 232 may be substituted with MMGT 101.

HYDRAULIC AND PNEUMATIC AUTOMATION TECHNICIAN AAS, Certificate: SCC

Graduates from the Hydraulic and Pneumatic Automation Technology program have developed skills to qualify for employment in hydraulic and pneumatic sales, automated equipment fabrication, plant machinery maintenance work or systems design.

Activities in sales and distribution vary from warehousing, inside sales, purchasing, outside sales, power unit fabrication to field service work. Each area offers challenging work, with most employers providing on–the–job training for product familiarization and developing the special skills required for sales and service in pneumatic automation products.

Activities include equipment or circuit design, shop assembly, installation of complex electro–hydraulic systems, field installation of new equipment or servicing existing equipment. Field service can involve world travel with a lot of time away from home.

Activities in industrial plant maintenance vary from installing new equipment to troubleshooting and repairing existing equipment. This requires developing analytical procedures and certain mechanical abilities or skills to improve equipment performance and reliability.

A 2.0 GPA or better must be maintained in all hydraulic and pneumatic automation technology coursework before advancing to the subsequent quarter. Students not meeting this minimum requirement may repeat the course(s) one time before progressing. A student who is below the minimum 2.0 GPA may seek a one–time waiver with the approval of the division dean.

AAS

First Quarter

BT	100	Beginning Keyboarding	1
CIS	105	Computer Fundamentals for Vocations I	4
FLPT	121	Pneumatic Theory	6
FLPT	122	Drawing Fundamentals	3
FLPT	123	Machine Controls	7
		Total	**21**

Second Quarter

AGGEN	152	Arc Welding	4
FLPT	111	Hydraulic Calculations	5
FLPT	112	Hydraulic Basics and Theory	5
FLPT	113	Blueprint Reading	4
FLPT	114	Basic Hydraulics Lab	2
		Total	**20**

Third Quarter

APLED	121	Applied Written Communication [1]	4
FLPT	131	Hydraulic Systems	6
FLPT	132	Fluid Line Fabrication	2
FLPT	133	Fluid Line Connectors	5
FLPT	134	Shop Drawing	2
FLPT	135	Fluid Line Sizing Calculations	2
		Total	**21**

Fourth Quarter

APLED	123	Leadership Skills for Business and Industry[1]	3
FLPT	230	Advanced Pneumatics Theory	3
FLPT	231	Advanced Pneumatics Lab	2
FLPT	232	Mechanical Drive Systems Theory	3
FLPT	233	Mechanical Drive Systems Lab	3
FLPT	234	Velocity and Load Calculations	1
FLPT	243	Advanced Machine Controls	4
		Total	**19**

Fifth Quarter

APLED	125	Employment Preparation [1]	3
FLPT	251	Hydraulic Circuits	4
FLPT	252	Hydraulic Component Repair	6
FLPT	253	Fluid Line Layout and Assembly	2
FLPT	254	Advanced Hydraulics Lab	3
FLPT	279	Proportional Valves	4
		Total	**22**

Sixth Quarter

EMS	120	Basic First Aid in the Workplace [2]	2
FLPT	264	Fluid Power Computer Applications [2]	4
FLPT	265	Hydraulic Circuit Design [2]	3
FLPT	268	Fluid Power Application and Sales [2]	5
FLPT	269	Hydraulic Manifold Design [2]	3
		Total	**17**

120 credits are required for the AAS

[1] This related education requirement may be met by any course or combination of courses approved by the instructional dean.
[2] Sixth quarter courses may be substituted with the following courses with department permission: FLPT 266 (1 credit) and FLPT 267 (1–16 credits) or FLPT 288 (1–17 credits).

Certificate
First Quarter

BT	100	Beginning Keyboarding	1
CIS	105	Computer Fundamentals for Vocations I	4
FLPT	121	Pneumatic Theory	6
FLPT	122	Drawing Fundamentals	3
FLPT	123	Machine Controls	7
		Total	**21**

Second Quarter

AGGEN	152	Arc Welding	4
FLPT	111	Hydraulic Calculations	5
FLPT	112	Hydraulic Basics and Theory	5
FLPT	113	Blueprint Reading	4
FLPT	114	Basic Hydraulics Lab	2
		Total	**20**

Third Quarter

APLED	121	Applied Written Communication [1]	4
FLPT	131	Hydraulic Systems	6
FLPT	132	Fluid Line Fabrication	2
FLPT	133	Fluid Line Connectors	5
FLPT	134	Shop Drawing	2
FLPT	135	Fluid Line Sizing Calculations	2
		Total	**21**

Fourth Quarter

		Applied Education Elective	3
		Total	**3**

65 credits are required for the Certificate

Applied Education Elective

APLED	123	Leadership Skills for Business and Industry	3
APLED	125	Employment Preparation	3

[1] This related education requirement may be met by any course or combination of courses approved by the instructional dean.

INFORMATION PROCESSING
AAS: SFCC

This program is for students who desire to work in an office environment using their skills in computer software applications, desktop publishing, web publishing, communications, business management, and office procedures.

This two–year degree prepares graduates to choose from a wide variety of positions available in business, industry, or non–profit organizations. Students will acquire speed and accuracy on the keyboard, develop business writing skills, acquire skills in troubleshooting routine computer problems, and develop a solid working knowledge of Microsoft applications. Students will complete capstone courses which will integrate classroom learning into real world office situations.

Students will have the opportunity to bridge the gap between the classroom and the working world by participating in model office simulations as well as a professional work experience internship.

AAS
First Quarter

BT	101	Keyboarding [1]	5
BT	107	Business Communications [2]	3
GENST	114	Thriving In College	2
IS	120	Business Computer Use	3
IS	160	Internet Fundamentals	1
		Total	**14**

Second Quarter

ACCT	103	Fundamental Bookkeeping Procedures [3]	3
BT	102	Document Processing	5
BT	108	Business Communications [2]	3
BUS	122	Practical Business Math [4]	3
CAPPS	171	PowerPoint I	2
		Total	**16**

Third Quarter

BT	103	Formatting	5
BT	155	Records Information Management	3
BT	172	Publisher	2
BT	231	Office Procedures [5]	5
		Total	**15**

Fourth Quarter

BT	258	Desktop Publishing	5
BT	272	Business Correspondence	5
CAPPS	151	Excel I	2
IS	210	Internet Programming I	3
		Total	**15**

Fifth Quarter

BT	235	Machine Transcription	5
BT	255	Business Productivity Tools	3
BT	260	Administrative Office Management	5
CAPPS	161	Access I	2
CAPPS	180	Outlook	2
		Total	**17**

Sixth Quarter

BT	160	Job Preparation Techniques	3
BT	201	Information Processing	5
BT	234	Administrative Professional Practicum	5
BT	270	Office Computer Support	3
BT	285	Administrative Professional Internship	2
		Total	**18**

95 credits are required for the AAS

[1] Students may take BT 102 if they possess keyboarding skills at 35 wpm and knowledge of business document formatting. Permission of instructor recommended.
[2] ENGL& 101 may be substituted. If ENGL& 101 is substituted, an additional credit is required to receive the total program credits of 95.
[3] ACCT& 201 may be substituted for ACCT 103.
[4] BUS 123 or MATH& 107 may be substituted for BUS 122.
[5] BUS 280 – Human Relations in Business or CMST& 210 – Interpersonal Communications, may be substituted for BT 231.

INFORMATION TECHNOLOGY
AAS: SFCC

The Information Technology AAS degree program is designed to provide students with capabilities in several areas of information technology:

- Computer and network installation and maintenance skills.
- Business computing skills including daily systems operations and applications programs.
- Security and forensics skills.
- Various Internet and network skills including web pages design, client/server side programming, web server installation and maintenance.
- Transfer option to a four–year institution.

This degree insures that the student is knowledgeable in a broad spectrum of information technology subjects that are often needed by the IT industry.

AAS

First Quarter

BT	100	Beginning Keyboarding	1
ENGL&	101	English Composition I	5
IS	101	Planning For Information Technology Students	1
IS	103	Information Technology Fundamentals	5
IS	105	Applications for IT I	3
		Total	**15**

Second Quarter

IS	107	Applications for IT II	3
IS	132	Computer Ethics & Law	5
IS	140	Computer and Network Support	5
IS	144	Programming Fundamentals	3
		Total	**16**

Third Quarter

CS	121	UNIX/Linux	3
ENGL&	235	Technical Writing	5
IS	162	Data Communications and Networks	3
IS	210	Internet Programming I	5
		Total	**16**

Fourth Quarter

CS	223	Programming for IT	5
IS	260	Database Theory	5
IS	262	Network Management	5
		Total	**15**

Fifth Quarter

IS	234	Computer Forensics I	5
IS	244	Network Security I	5
MATH	098	Algebra III	5
		Total	**15**

Sixth Quarter

IS	228	Internet Servers	5
IS	245	Network Security II	5
IS	266	Cooperative Education Seminar	1
IS	267	Cooperative Education Work Experience	2
PHYS	100	Introductory Physics	5
		Total	**18**

95 credits are required for the AAS

INTEGRATED BUSINESS AND ENTREPRENEURSHIP PROGRAM
Certificate: SCC

The IBE program offers a hands–on approach to training our future business leaders and entrepreneurs. Students from all areas of study will participate in a two quarter business experience where they will create a business from the ground up. College instructors and local business and community leaders guide students through the process of starting and launching a business. Students will master academic material by producing deliverables in an authentic business environment created on the SCC campus.

Students entering the program need a minimum cumulative GPA of 2.0 or permission of the department chair. Students may not currently be on academic probation. An application to the program needs to be completed followed by an interview by the IBE instructors. Completion of a small business planning class is highly recommended before entering the program.

Certificate

First Quarter

IBE	201	Integrated Business and Entrepreneurship Principles I	10
IBE	202	Integrated Business and Entrepreneurship Principles II [1]	5
		Total	**15**

Second Quarter

IBE	203	Integrated Business and Entrepreneurship Principles III	10
		Total	**10**

25 credits are required for the Certificate

[1] IBE 202 may be repeated twice for a total of 10 credits.

INTERIOR DESIGN
AAS, Interior Design Professional Diploma: SFCC

The Interior Design program at Spokane Falls Community College offers a broad–based and professionally relevant curriculum designed to enable graduates to successfully compete for jobs and to function as interior designers. Students who enter the program have various alternatives. They may complete an associate in applied science degree (AAS) in six quarters with an emphasis in residential design. These students could obtain employment in residential–oriented retail establishments such as wallcovering and furniture stores.

Students also may receive a Professional Interior Design Diploma in addition to the AAS degree by completing an optional one–year program. These students will have their AAS prior to beginning the additional year. The third year will qualify students for entry–level positions as professional interior designers and will emphasize commercial design, business, communications and advanced design specialty courses. These students will have a broad range of employment opportunities with architectural firms, commercial design firms, as well as a variety of retail design establishments. Students completing the additional year are required to prepare a portfolio and complete at least 165 hours of internship that will ease the transition from school to work. In order to be certified into the third year program, students must complete a review process upon completion of their second year.

Spokane Falls Community College and Washington State University have an articulation agreement offering interior design students the best of both worlds in education and career choices. The partnership allows students to begin at SFCC, earn a three–year professional diploma, then transfer with senior standing to WSU Spokane's Interdisciplinary Design Institute, where they can earn a four–year bachelor's degree. For more information, refer to the Interior Design–Transfer Track career planning guide.

AAS

First Quarter

HS	136	Improving Interpersonal Communication	5
INTDS	105	Design Drawing	4
INTDS	170	Elements of Interior Design	5
INTDS	173	Architectural Graphics 1	4
		Total	**18**

Second Quarter

ENGL&	101	English Composition I	5
FMDSE	180	Retail Sales Techniques	3
INTDS	106	Sketching Techniques	4
INTDS	184	Architectural Graphics II	4
		Total	**16**

Third Quarter

INTDS	107	Rendering Techniques	4
INTDS	187	Architectural Graphics III	4
INTDS	280	Textiles for Interiors	5
		Speech Communication Electives	5
		Total	**18**

Fourth Quarter

INTDS	171	Interior Design Studio I	6
INTDS	175	Materials of Interior Design	5
INTDS	179	History of Interiors I	3
		Math Elective	3-5
		Total	**17–19**

Fifth Quarter

INTDS	172	Interior Design Studio II	6
INTDS	180	History of Interiors II	3
INTDS	185	Building Systems for Interior Design	3
INTDS	186	Lighting Design	3
		Total	**15**

Sixth Quarter

INTDS	176	Special Environments	6
INTDS	181	History of Interiors III	3
INTDS	285	Computer Aided Design I	4
		Suggested Electives [1]	5
		Total	**18**

102-104 credits are required for the AAS

Math Elective

BUS	102	Math Skills for Business	3
MATH&	107	Math in Society	5

Speech Communication Electives

CMST&	101	Introduction to Communication	5
CMST&	220	Public Speaking	5

[1] See department for list of suggested electives.

Interior Design Professional Diploma

First Quarter

GRDSN	158	PhotoShop I	2
GRDSN	163	InDesign I	2
INTDS	281	Commercial Design Studio I	6
INTDS	286	Computer Aided Design II	4
SOC&	101	Intro to Sociology	5
		Total	**19**

Second Quarter

INTDS	275	Professional Practices	3
INTDS	282	Commercial Design Studio II	6
INTDS	287	Digital Interior Design Technology	4
INTDS	289	Computer Aided Design III	4
		Total	**17**

Third Quarter

ENVS&	101	Intro to Env Science	5
INTDS	266	Cooperative Education Seminar	2
INTDS	267	Cooperative Education Work Experience	5
INTDS	268	Design Portfolio	3
		Total	**15**

51 credits are required for the Interior Design Professional Diploma

INTERNATIONAL STUDIES PRE-MAJOR AA–DTA: SFCC

The International Studies pre–major provides students with an opportunity for an international focus for their program of study. This pre–major may be completed in two years in conjunction with the associate of arts (AA) degree. An effort has been made to see that students earning this pre–major and graduating with an AA degree will be able to transfer to Eastern Washington University and Gonzaga University and be accepted into their International Affairs programs at junior standing.

Consult a counselor or academic adviser for recommended courses specific to student's choice of transfer institution.

AA–DTA

ANTH&	206	Cultural Anthropology	5
ECON&	202	Macro Economics	5
GEOG	101	Introduction to Geography	5
POLS	125	Introduction to Global Issues	5
POLS&	203	International Relations	5
		Foreign Language [1]	15
		Humanities [2]	15
		Remaining AA Degree Requirements [3]	35
		Total	**90**

90 credits are required for the AA–DTA

Foreign Language

CHIN&	121	Chinese I	5
CHIN&	122	Chinese II	5
CHIN&	123	Chinese III	5
FRCH&	121	French I	5
FRCH&	122	French II	5
FRCH&	123	French III	5
FRCH&	221	French IV	5
FRCH&	222	French V	5
FRCH&	223	French VI	5
GERM&	121	German I	5
GERM&	122	German II	5
GERM&	123	German III	5
JAPN&	121	Japanese I	5
JAPN&	122	Japanese II	5
JAPN&	123	Japanese III	5
JAPN&	221	Japanese IV	5
JAPN&	222	Japanese V	5
JAPN&	223	Japanese VI	5
RUSS&	121	Russian I	5
RUSS&	122	Russian II	5
RUSS&	123	Russian III	5
SPAN&	121	Spanish I	5
SPAN&	122	Spanish II	5
SPAN&	123	Spanish III	5
SPAN&	221	Spanish IV	5
SPAN&	222	Spanish V	5
SPAN&	223	Spanish VI	5

Humanities

ART&	100	Art Appreciation	5
ART	108	Ancient/Medieval Art	5
CMST	227	Intercultural Communication	5

ENGL	271	World Literature to 1650	5
PHIL&	101	Intro to Philosophy	5

[1] Select three classes in one foreign language: Chinese, French, German, Japanese, Russian, or Spanish. This is a minimum requirement; students should complete at least two years of a foreign language and achieve fluency in speaking and writing before finishing a four–year degree.
[2] Select 15 credit hours of classes from three disciplines in this humanities list.
[3] Completion of the requirements as listed will satisfy the humanities, social science and elective categories of the AA degree. Remaining AA degree requirements in communication, intermediate algebra and quantitative/ symbolic reasoning, math/science, and health related/PE/ recreational/leisure activities courses must also be completed. A total of 90 quarter credits in courses numbered 100 or above are required.

INTERPRETER TRAINING PROGRAM
AAS–T, Certificate: SFCC

The AAS–T is an associate degree providing comprehensive core interpreter training program content based on the CEIC accreditation standards. The critical content coursework in the AAS–T addresses all of the Educational Interpreter Education competencies required by the Washington State Board of Education for certified education endorsement in Deaf Education P–12 from OSPI. The balance of the degree is made up of significant general education coursework credits necessary for transfer.

The Interpreter Training Program is an innovative program that offers the opportunity to acquire basic skills to launch into a new career in the sign language interpreting field skill in American Sign Language or to use sign language as a foreign language credit. Program courses are offered on campus and online.

Those who are skilled interpreters, in addition to having a trade or profession, provide a valuable service to society, making it possible to provide equal access for deaf and hard–of–hearing people to all area of employment, social services and education.

AAS–T

In addition to the degree prerequisites, the program faculty highly recommend taking any of the following courses: CMST& 210, ECED 190, ECED 290, EDUC& 204, GENST 114, HS 136, PSYC& 210, PE 104, PE 174. For more information regarding these Recommended Courses, see footnote number 1.

Prerequisites:

– ASL&	121	Am Sign Language I
– ASL&	122	Am Sign Language II
– ASL&	123	Am Sign Language III
– PSYC&	100	General Psychology

First Quarter

ASL&	221	American Sign Language IV	5
ENGL&	101	English Composition I	5
ITP	241	Deaf Social and Cultural Issues	5
		Total	**15**

Second Quarter

ASL&	222	American Sign Language V	5
ITP	104	Introduction to Audiologic Rehabilitation/Habilitation	4
ITP	231	Theories of Discourse Analysis	3
ITP	232	ASL Linguistic Principles	2
		Total	**14**

Third Quarter

ASL&	223	American Sign Language VI	5
ITP	233	Manually Coded English Systems	5
PSYC&	200	Lifespan Psychology	5
		Total	**15**

Fourth Quarter

ITP	245	Ethics and Principles in Educational Interpreting	5
ITP	251	Interpreting I	5
ITP	261	Transliteration I	5
ITP	281	Applied Interpreting I	1
		Total	**16**

Fifth Quarter

ITP	252	Interpreting II	5
ITP	262	Transliteration II	5
ITP	282	Applied Interpreting II	2
MATH&	107	Math in Society	5
		Total	**17**

Sixth Quarter

ITP	253	Interpreting III	5
ITP	263	Transliteration III	5
ITP	283	Applied Interpreting III	3
		Total	**13**

90 credits are required for the AAS–T

Recommended Courses

ECED	190	Child Development [1]	5
ECED	290	School-age Development [1]	5
GENST	114	Thriving In College [1]	2
HLTH	101	Health and Wellness [1]	3
HLTH	104	Stress Management [1]	3
HS	136	Improving Interpersonal Communication	5

[1] These courses are necessary to address the Educational Interpreter Education competencies required by the Washington State Board of Education for certified education endorsement in Deaf Education P–12.

Certificate

Students applying for a certificate of completion must currently hold an AA, AAS, BA or BS, have completed ASL& 121, 122, 123 and PSYC& 100, and complete a specified 85 credit sequence of courses in the human services interpreter training program.

Prerequisites:

– ASL&	121	Am Sign Language I	
– ASL&	122	Am Sign Language II	
– ASL&	123	Am Sign Language III	
– ENGL&	101	English Composition I	
– MATH&	107	Math in Society	
– PSYC&	100	General Psychology	
		Prerequisite: AA, AAS, BA or BS Degree	0
		Total	**0**

First Quarter

ASL&	221	American Sign Language IV	5
ITP	241	Deaf Social and Cultural Issues	5
PSYC&	200	Lifespan Psychology	5
		Total	**15**

Second Quarter

ASL&	222	American Sign Language V	5
ITP	104	Introduction to Audiologic Rehabilitation/Habilitation	4
ITP	231	Theories of Discourse Analysis	3
ITP	232	ASL Linguistic Principles	2
		Total	**14**

Third Quarter

ASL&	223	American Sign Language VI	5
ITP	233	Manually Coded English Systems	5
PSYC	210	Conception through Adolescent Developmental Psychology [1]	5
		Total	**15**

Fourth Quarter

ITP	245	Ethics and Principles in Educational Interpreting	5
ITP	251	Interpreting I	5
ITP	261	Transliteration I	5
ITP	281	Applied Interpreting I	1
		Total	**16**

Fifth Quarter

ITP	252	Interpreting II	5
ITP	262	Transliteration II	5
ITP	282	Applied Interpreting II	2
		Total	**12**

Sixth Quarter

ITP	253	Interpreting III	5
ITP	263	Transliteration III	5
ITP	283	Applied Interpreting III	3
		Total	**13**

85 credits are required for the Certificate

[1] May take ECED 290 if PSYC 210 was taken in previous degree.

JOURNALISM PRE-MAJOR
AA–DTA: SFCC

The journalism curriculum helps students develop valuable critical thinking and writing skills while they learn up to date interviewing and computer assisted research techniques. Students also learn about the role different media play in shaping our lives and perceptions about society.

Some students decide to apply what they learned toward a career in journalism; others decide to use their coursework to lay the foundation for a career in public relations, business, advertising, marketing, graphic design or technical writing. SFCC's award winning student news publications, **Communicator** and **Communicator Online,** allow students to gain hands on experience in writing, editing, photography, layout, marketing, advertising, web design and business management.

AA–DTA
First Quarter

ENGL&	101	English Composition I	5
JOURN	101	College Newspaper Production I	3
JOURN	110	Mass Media	5
		Health Elective	3
		Total	**16**

Second Quarter

ECON&	201	Micro Economics	5
JOURN	102	College Newspaper Production II	3
JOURN	220	Introduction to News Writing	5
PHOTO	101	Introduction to Photography	5
		Total	**18**

Third Quarter

HUM	107	Introduction to Cultural Studies [1]	5
JOURN	103	College Newspaper Production III	3
JOURN	224	Advanced News Reporting	5
PHIL	210	Ethics	5
		Total	**18**

Fourth Quarter

ENGL&	111	Intro to Literature [2]	5
JOURN	201	College Newspaper Production IV	3
JOURN	225	Multimedia Journalism	5
PHIL&	106	Intro to Logic	5
		Total	**18**

Fifth Quarter

BIOL	100	Environmental Biology	5
HIST	141	History of China	5
JOURN	202	College Newspaper Production V	3
MATH	221	Introduction to Probability and Statistics	5
		Total	**18**

Sixth Quarter

JOURN	203	College Newspaper Production VI	3
NUTRI	251	Nutrition	5
PSYC&	100	General Psychology	5
		Total	**13**

101 credits are required for the AA–DTA

Health Elective

HLTH	101	Health and Wellness	3
HLTH	104	Stress Management	3
HLTH	174	First Aid	3

[1] HUM 107 can be substituted with GRDSN 100.
[2] ENGL& 111 can be substituted with HUM& 101.

INVASIVE CARDIOVASCULAR TECHNOLOGY
AAS: SCC

The invasive cardiovascular technologist is a health care professional who, through the use of specific high–technology equipment and at the direction of a qualified physician, performs procedures on patients leading to the diagnosis and treatment of congenital and acquired heart disease, and peripheral vascular disease.

As a member of the cardiac catheterization team, the cardiovascular technologist is a surgical scrub assistant, monitors the patient's condition and operates other "CATH Lab" equipment.

The most important "CATH Lab studies are coronary angiography, percutaneous coronary intervention (where stents, balloons, plaque removal devices, and other treatments to restore blood flow are deployed), right heart catheterization (where blood flow measurements are made), electrophysiology (where irregular heartbeats are created, studied and treated) and pacemaker implantations.

The invasive cardiovascular technologist also works with physicians during critical times during heart attacks by restoring blood flow to diseased areas of the heart. They assist with percutaneous revascularization, give clot–dissolving drugs, and operate cardiac assist pumps.

The first year of the Invasive Cardiovascular program teaches basic sciences and cardiology and is combined with the Noninvasive Cardiovascular program. In the second year, the Invasive students concentrate on the technical duties of a cardiac catheterization technologist and spend time working in local hospital cardiac laboratories.

Upon completion of the didactic training (six quarters), the student selects an out–of–town medical center where he/she will complete the final quarter of clinical internship. Students may take the CCI National Registry Exam upon graduation. The program is the only CAAHEP approved invasive technology program in the northwestern United States. The Cardiovascular

Technology Programs (Invasive and Noninvasive) are accredited by the Commission on Accreditation of Allied Health Education Programs (www.caahep.org) upon the recommendation of the Joint Review Committee for Cardiovascular Technology (www.jrccvt.org). JRC–CVT 6 Pine Knoll Dr. Beverly, MA 01915–1425.

- High school diploma or GED certificate required
- Appropriate scores in ASSET or COMPASS required
- Computer skills recommended
- Active e–mail account recommended
- A 2.0 grade must be maintained quarterly in each course before proceeding to the next quarter.
- Students may repeat an invasive cardiovascular course once, but it must be repeated within two years.

AAS
Prerequisites:

– BIOL&	160	General Biology w/Lab	
– BIOL&	241	Human A & P 1	
– BIOL&	242	Human A & P 2	
– CMST	127	Leadership Development	
– ENGL&	101	English Composition I	
– MATH	099	Intermediate Algebra	
– PHYS	100	Introductory Physics	

First Quarter

HED	109	Human Physiology and Disease	5
ICT	113	Electrophysiology	4
ICT	114	Introduction to Cardiac Care	3
ICT	115	Technical Skills - CPR for Health Care Providers	1
ICT	116	Acute Coronary Syndrome	1
ICT	117	Cardiovascular Pharm 1	1
		Total	**15**

Second Quarter

ICT	124	CV Diagnostic Exams	4
ICT	125	Hemodynamics	2
ICT	126	Technical Skills/Reading Hemodynamics	1
ICT	127	Cardiovascular Pharm 2/ Intravenous Therapy	1
ICT	128	Technical Skills/Pharmacology/ Intravenous Therapy	1
ICT	129	CPR Instructor	1
PHYS	120	Fundamentals of Medical Physics	5
		Total	**15**

Third Quarter

ICT	134	Cath Lab Procedures	3
ICT	135	Technical Skills Cath Lab Procedures	1
ICT	138	Cardiovascular Physiology	4
ICT	139	Radiation Safety	2
ICT	140	Surgical Asepsis	1
ICT	141	Technical Skills/Surgical Asepsis	1
		Total	**12**

Fourth Quarter

ICT	144	Patient Care and Assessment	4
ICT	145	Technical Skills/Cath Lab Boot Camp/ Patient Care	4
ICT	146	Cath Lab Clinical I	6
		Total	**14**

Fifth Quarter

ICT	203	Advanced Cardiac Life Support Course	2
ICT	204	Advanced Cardiac Life Support Technical Skills Lab	1
ICT	214	Cardiac Interventions/PCI	3
ICT	215	Interventional Radiology	2
ICT	216	Electrophysiology 1 Introduction to Devices	2
ICT	217	Technical Skills/PCI/EP/Special Equipment	2
ICT	218	Cath Lab Clinical II	5
ICT	219	Cardiopulmonary Pathophysiology	1
		Total	**18**

Sixth Quarter

ICT	224	Advanced Practices/Management	5
ICT	225	Pediatric Cath	1
ICT	226	Statistics and Research	1
ICT	227	Electrophysiology 2 Interventions	2
ICT	228	Technical Skills/Peds/Special Procedures/EP	2
ICT	229	Cath Lab Clinical III	5
		Total	**16**

Seventh Quarter

ICT	234	Board Registry (RCIS) Prep Blackboard	4
ICT	235	Cath Lab Clinical IV	12
		Total	**16**

106 credits are required for the AAS

LANDSCAPE MANAGEMENT
AAS, Certificate: SCC

The landscape program provides a study of turf and ornamental plant materials and how they relate to landscape design, construction, installation, maintenance, bidding & estimating, irrigation and arboriculture. The curriculum is built around landscape certified competencies. At the completion of the second year, the student may receive the associate in applied sciences degree.

This program is accredited by the Professional Landcare Network (PLANET) landcarenetwork.org

Courses may only be offered in the quarter indicated. Outlined curriculum assumes students begin the program fall quarter and continue winter and spring quarters, with summer quarter off. It is recommended that students work closely with the program advisor or department chair when planning classes.

AAS
First Quarter

AGGEN	156	Equipment Operation and Maintenance	2
AGHRT	102	Pesticides and Fertilizer Application Equipment	2
AGHRT	104	Principles of Pest Management	5
AGHRT	110	Fall Landscape Plant Materials	5
AGHRT	171	Agricultural Leadership Training	1
APLED	121	Applied Written Communication [1]	4
		Total	**19**

Second Quarter

AGGEN	151	Shop Skills	4
AGHRT	116	Green Industry Business Management	5
AGHRT	172	Agricultural Leadership Training	1
ENVS	110	Plant Biology	5
		Total	**15**

Third Quarter

AGHRT	112	Spring Landscape Plant Materials	5
AGHRT	206	Landscape Construction	4
AGHRT	226	Turfgrass Management	5
ENVS	210	Environmental Soil Science	5
		Total	**19**

Fourth Quarter

AGHRT	266	Cooperative Education Seminar	1
AGHRT	267	Cooperative Education Work Experience	3
		Total	**4**

Fifth Quarter

AGHRT	115	Pruning	2
AGHRT	204	Landscape Design 1	4
AGHRT	228	Arboriculture	5
AGHRT	230	Plant Problem Diagnosis	5
AGHRT	232	Pest Management Project	2
		Total	**18**

Sixth Quarter

AGHRT	202	Principles of Irrigation	4
AGHRT	205	Landscape Design 2	4
AGHRT	219	Soil Management and Fertility	5
BUS	280	Human Relations in Business	5
		Total	**18**

Seventh Quarter

AGHRT	201	Landscape Installation	4
AGHRT	225	Weed Biology and Control	5
AGHRT	234	Bidding and Estimating	2
MMGT	205	Small Business Planning	5
		Total	**16**

109 credits are required for the AAS

[1] This related education requirement may be met by any course or combination of courses approved by the instructional dean.

Certificate

The Landscape Management Certificate provides a study of landscape design and turfgrass management. Students must enter in the fall quarter in order to finish three quarters.

First Quarter

AGGEN	156	Equipment Operation and Maintenance	2
AGHRT	102	Pesticides and Fertilizer Application Equipment	2
AGHRT	104	Principles of Pest Management	5
AGHRT	110	Fall Landscape Plant Materials	5
AGHRT	171	Agricultural Leadership Training	1
APLED	121	Applied Written Communication [1]	4
		Total	**19**

Second Quarter

AGGEN	151	Shop Skills	4
AGHRT	116	Green Industry Business Management	5
AGHRT	172	Agricultural Leadership Training	1
ENVS	110	Plant Biology	5
		Total	**15**

Third Quarter

AGHRT	112	Spring Landscape Plant Materials	5
AGHRT	206	Landscape Construction	4
AGHRT	226	Turfgrass Management	5
ENVS	210	Environmental Soil Science	5
		Total	**19**

53 credits are required for the Certificate

[1] This related education requirement may be met by any course or combination of courses approved by the instructional dean.

LAW PRE-MAJOR
AA–DTA: SCC/SFCC

Law has been an important element of every civilization in the history of humans. It is a profession for those who have good reasoning powers, the ability to express themselves clearly and concisely, and an understanding of their fellow human beings.

Students planning to enter law school usually must complete a four–year baccalaureate degree with an emphasis from one of a number of areas, such as political science, business administration, history or communications.

AA–DTA

	Suggested Courses to Consider [1]	90
	Total	**90**

90 credits are required for the AA–DTA

[1] Consult a counselor or academic adviser for recommended courses specific to student's choice of transfer institution.

LEGAL ADMINISTRATION
AAS: SCC

Legal Administration is a career path in which the individual is typically employed in a supervisory role in a law office or other legal setting (court administration, etc.). The role requires management, financial, accounting, computer information systems, human resource management and legal knowledge. Experience and/or training in administration, marketing, accounting, business management, or law is preferred, but is not a mandatory prerequisite.

If interested in pursuing a four–year degree, ask a counselor or faculty adviser about transfer articulation agreements.

AAS

First Quarter

ENGL&	101	English Composition I	5
MATH	099	Intermediate Algebra	5
MMGT	101	Principles of Management	5
		Total	**15**

Second Quarter

ACCT&	201	Prin of Accounting I	5
CMST	287	Business and Professional Communication	3
LA	218	Employment Law	3
MMGT	211	Marketing	5
		Total	**16**

Third Quarter

ACCT&	202	Prin of Accounting II	5
CATT	128	Desktop Publishing	5
MMGT	231	Human Resource Management	5
		Total	**15**

Fourth Quarter

ACCT	162	Business Tax Accounting	1
BUS	280	Human Relations in Business	5
CIS	138	Home Networking	2.5
CIS	139	Small Office Home Office Computer Basics	2.5
LA	245	Supervised Legal Work Experience [1]	3
		Total	**14**

Fifth Quarter

BUS	217	Business Statistics	5
LA	240	Special Issues Seminar	5
LA	245	Supervised Legal Work Experience	4
		Approved Business Electives	3-5
		Total	**17–19**

Sixth Quarter

CATT	138	Microsoft Excel I	2.5
CATT	139	Microsoft Excel II	2.5
LA	230	Insurance Law	3
LA	245	Supervised Legal Work Experience	5
		Total	**13**

90-92 credits are required for the AAS

Approved Business Electives

ACCT	141	QuickBooks [2]	5
BT	280	Project Management for the Office	2.5
BUS	120	International Business	5
CATT	241	Microsoft Project [3]	2.5
MMGT	181	Leadership Training-DEC	1-5
MMGT	182	Leadership Training-DEC	1-5
MMGT	183	Leadership Training-DEC	1-5
MMGT	191	Leadership Training-DEC	1-5
MMGT	192	Leadership Training-DEC	1-5
MMGT	193	Leadership Training-DEC	1-5

[1] A total of 3 credits of MMGT 100 (Supervised Volunteer Experience) may be used to substitute a portion of LA 245.
[2] ACCT 141 has a prerequisite of ACCT 151 or permission of instructor.
[3] CATT 241 has a prerequisite of CIS 110 or equivalent experience is recommended.

LEGAL ADMINISTRATIVE ASSISTANT
AAS, Certificate: SCC

The Legal Administrative Assistant program combines a well–balanced academic program with expert legal office instruction, giving the student the diversified training and background needed to hold a position of responsibility and importance in many areas of the legal world. This program helps raise the legal office skills of the student to a professional level, gives the student a technical background through completion of technical skill courses and an academic background, provides the student a mature understanding of professional responsibilities, and provides for minimum additional on–the–job training.

To enter the certificate program, students must pass a keyboarding test with 40 wpm. A 2.0 grade or better in each class is required for an A.A.S. degree or Certificate.

AAS

First Quarter

BT	102	Document Processing [1]	5
BT	105	Basic Grammar for Business II	5
BT	151	Business Student Preparation	5
		Total	**15**

Second Quarter

BT	109	Business Communications	5
BT	165	Word Processing	5
CATT	102	Introduction to Outlook	2.5
		Business Elective	3-5
		Total	**15.5–17.5**

Third Quarter

BT	160	Job Preparation Techniques	3
BT	231	Office Procedures	5
BT	235	Machine Transcription	5
		Electives - Legal Administrative Assistant [2]	5
		Total	**18**

Fourth Quarter

BT	272	Business Correspondence	5
LSEC	236	Legal Terminology	5
LSEC	239	Legal Formatting [3]	5
		Total	**15**

Fifth Quarter

LSEC	216	Legal Office Procedures [4]	5
LSEC	237	Legal Terminology	5
LSEC	244	Legal Machine Transcription [5]	5
		Total	**15**

Sixth Quarter

BT	250	Information Technology	5
LA	105	Washington and Idaho Court Rules	3
LSEC	233	Legal Office Practice	5
LSEC	285	Legal Office Internship	3
		Total	**16**

94.5-96.5 credits are required for the AAS

Business Elective

BUS	102	Math Skills for Business	3
BUS	103	Basic Business Math and Electronic Calculators	5

Electives – Legal Administrative Assistant

ACCT	151	College Accounting I [2]	5
ACCT&	201	Prin of Accounting I [2]	5
BT	201	Information Processing [2]	5
BUS	204	Introduction to Law [2]	5
BUS	280	Human Relations in Business [2]	5
CATT	120	Microsoft Word I	2.5
CATT	121	Microsoft Word II	2.5
CATT	122	Microsoft Access I	2.5
CATT	123	Microsoft Access II	2.5
CATT	138	Microsoft Excel I	2.5
CATT	139	Microsoft Excel II	2.5
CATT	190	Introduction to PowerPoint	2.5
CATT	191	Advanced PowerPoint	2.5
CATT	222	Advanced Microsoft Access I	2.5
CATT	223	Advanced Microsoft Access II	2.5
CATT	238	Advanced Microsoft Excel I	2.5
CATT	239	Advanced Microsoft Excel II	2.5
CMST&	210	Interpersonal Communication [2]	5
HED	104	Medical Terminology and Anatomy	5

[1] Students are placed in formatting courses according to their ability. Students who are given advanced standing in keyboarding classes will need to take business electives to meet the credits required for graduation.
[2] Electives must be taken from the following list of courses: ACCT& 201 or ACCT 151, BT 201, BUS 204, 280, CMST& 210. Other unnamed 5–credit courses may be substituted with approval of the program coordinator.
[3] Prerequisites for legal assistant students taking these classes as part of the legal assistant program are keyboarding skills of 40 wpm, BT 102, 109 and 165 with a grade of 2.0 or better, or with permission of the program coordinator.
[4] LSEC 239 and enrollment in the legal administrative assistant program or permission of the instructor.
[5] BT 235 and LSEC 239 with a grade of 2.0 or better or permission of the instructor.

Certificate

First Quarter

BT	109	Business Communications [1]	5
LSEC	236	Legal Terminology	5
LSEC	239	Legal Formatting [2]	5
		Business Elective	3-5
		Total	**18–20**

Second Quarter

BT	231	Office Procedures [3]	5
LSEC	237	Legal Terminology	5
LSEC	244	Legal Machine Transcription [4]	5
		Total	**15**

Third Quarter

LA	105	Washington and Idaho Court Rules	3
LSEC	216	Legal Office Procedures [5]	5
LSEC	233	Legal Office Practice	5
LSEC	285	Legal Office Internship	3
		Total	**16**

49-51 credits are required for the Certificate

Business Elective

BUS	102	Math Skills for Business	3
BUS	103	Basic Business Math and Electronic Calculators	5

[1] Must be taken during the first quarter concurrent with LSEC 239.
[2] Prerequisites for legal assistant students taking these classes as part of the legal assistant program are keyboarding skills of 40 wpm, BT 102, 109 and 165 with a grade of 2.0 or better or with permission of the program coordinator.
[3] This course may be substituted with any related course, a combination of courses or prior office experience approved by the program coordinator.
[4] BT 235 and LSEC 239 with a grade of 2.0 or better or permission of the instructor.
[5] LSEC 239 and enrollment in the legal administrative assistant program or permission of the instructor.

LEGAL NURSE
Certificate: SCC

The primary role of the legal nurse consultant is to evaluate, analyze, and render informed opinions on the delivery of health care and the resulting outcomes. The legal nurse consultant practices this nursing specialty in a variety of settings, including law offices, government offices, insurance companies, risk management, or as a self–employed practitioner. The nurse serves as a liaison between the legal and health care communities. This regionally respected ABA approved program is typically awarded upon completion of 62–67 credits of required course work (depending on math requirements).

Note: A legal nurse graduate does not receive a license to practice law; thus performing legal work directly for the public or giving legal advice directly to the public constitutes the unauthorized practice of law.

Program Requirements: To enter the Legal Nurse Certificate program, students must have completed an AAS degree in nursing, and possess a current state license and at least two years' nursing experience with no more than one year since last employed in the field. Substitutions for prerequisites and program courses may be made and/or waived by the program coordinator.

Certificate Requirements: The certificate requires 10 credits of general education courses and 20 credits of basic law courses, plus 8 credits of LA 245, 24 credits of legal specialty courses and 5 credits of other courses if the student does not select from the math options portion of the general education courses. Students with at least one or more years of current legal experience under the direct supervision of an attorney may, with the approval of the program coordinator, have a part of LA 245 waived and instead substitute an equal number of additional legal specialty courses credits.

Students should begin early to meet the prerequisites for LA 120 which are LSEC 239 and a college–level computer course recommended to be selected from the BT, CIS or LSEC departments' offerings. A grade of 2.0 or higher in each class (including prerequisites) are required for this certificate.

Certificate

Basic Courses	20
General Education Courses	5
Other Courses	0-5
Social Science or Humanities Course [1]	5
Specialty Courses	24
Supervised Legal Work Experience	8
Total	**62–67**

62-67 credits are required for the Certificate

Basic Courses

LA	100	Legal Careers Orientation	1
LA	102	Introduction to Legal Nursing	1
LA	105	Washington and Idaho Court Rules	3
LA	110	Legal Research and Writing [2]	5
LA	118	Instrument Drafting	3
LA	120	Law Office Computing [3]	5
LA	130	Legal Ethics	1
LA	135	Professional Effectiveness	1

General Education Courses

MATH&	141	Precalculus I [1]	5

Other Courses

BUS	104	Business Mathematics [4]	5

Specialty Courses

BUS	204	Introduction to Law [5]	5
LA	218	Employment Law	3
LA	219	Criminal Law and Procedure	3
LA	220	Torts	3
LA	225	Trial Preparation and Procedures	3
LA	230	Insurance Law	3
LA	240	Special Issues Seminar [6]	1-10
LA	285	Legal Office Internship [7]	3

Supervised Legal Work Experience

LA	245	Supervised Legal Work Experience [8]	8

[1] See program coordinator for an additional list of courses.
[2] Prerequisite is ENG& 101.
[3] Prerequisites are LSEC 239 and a college–level computer course recommended to be selected from the BT, CIS or LSEC departments' offerings.
[4] Only needed if the student chooses BUS 104 as his/her math requirement. (Not required if MATH& 141 or higher is chosen for the math requirement.)
[5] Prerequisites for all Legal Specialty Courses: LA 100, 102, 110.
[6] Because each course is different, LA 240 may be repeated as frequently as desired and all credits received may be applied toward the 24 specialty credit requirement for degree.
[7] Maximum of 3 credits of internship may be applied toward this degree.
[8] Students must complete 8 credits.

LEGAL OFFICE SOFTWARE SPECIALIST
Certificate: SCC

This program prepares students for legal office positions where the primary duties are the operation of disk–controlled computer equipment; typing and proofreading manuscripts, tables, reports, correspondence, and other documents from dictating machines or rough drafts; correcting errors in existing documents; and consulting with persons initiating job requests. A minimum grade of 2.0 in each class is required for a Certificate.

Certificate
First Quarter

BT	102	Document Processing	5
BT	109	Business Communications [1]	5
BT	151	Business Student Preparation	5
LSEC	236	Legal Terminology	5
		Total	**20**

Second Quarter

BT	165	Word Processing	5
BT	231	Office Procedures	5
CATT	102	Introduction to Outlook	2.5
LSEC	237	Legal Terminology	5
		Total	**17.5**

Third Quarter

BT	201	Information Processing	5
LSEC	216	Legal Office Procedures	5
LSEC	239	Legal Formatting [2]	5
		Business Elective	3-5
		Total	**18–20**

Fourth Quarter

CATT	128	Desktop Publishing	5
CATT	238	Advanced Microsoft Excel I [3]	2.5
CATT	239	Advanced Microsoft Excel II	2.5
LA	120	Law Office Computing	5
LSEC	285	Legal Office Internship	3
		Software Elective	1-3
		Total	**19–21**

74.5-78.5 credits are required for the Certificate

Business Elective

BUS	102	Math Skills for Business	3
BUS	103	Basic Business Math and Electronic Calculators	5

Software Elective

CATT	122	Microsoft Access I	2.5
CATT	123	Microsoft Access II	2.5
CATT	190	Introduction to PowerPoint	2.5
CATT	191	Advanced PowerPoint	2.5
CIS	138	Home Networking	2.5
CIS	139	Small Office Home Office Computer Basics	2.5

[1] Must meet minimum standard on assessment test or 2.0 or better in BT 104 or 105.
[2] Prerequisites for enrollment in this class are keyboarding skills of 40 wpm; BT 102 and 165; BT 109 or ENGL& 101 with a grade of 2.0 or higher or permission of instructor.
[3] BT 201 must be completed prior to enrolling in CATT 238.

LEGAL RECEPTIONIST
Certificate: SCC

This program prepares students for office positions in which the primary duties are performing general legal office work; greeting, scheduling and routing legal clients; and answering the telephone. After completing this program, students may choose to take additional courses for an advanced certificate or degree in the Legal Administrative Assistant program. A minimum grade of 2.0 in each class is required for a certificate.

Certificate
First Quarter

BT	102	Document Processing	5
BT	109	Business Communications	5
BT	151	Business Student Preparation	5
LSEC	236	Legal Terminology	5
		Total	**20**

Second Quarter

BT	165	Word Processing	5
CATT	102	Introduction to Outlook	2.5
LSEC	237	Legal Terminology	5
LSEC	239	Legal Formatting [1]	5
		Total	**17.5**

Third Quarter

BT	231	Office Procedures [2]	5
LSEC	216	Legal Office Procedures	5
LSEC	285	Legal Office Internship	3
		Business Elective	3-5
		Total	**16–18**

53.5-55.5 credits are required for the Certificate

Business Elective

BUS	102	Math Skills for Business	3
BUS	103	Basic Business Math and Electronic Calculators	5

[1] Prerequisites for enrollment in this class are keyboarding speed of 40 wpm and BT 165 and 109 with a grade of 2.0 or better, or permission of the program coordinator.
[2] This course may be substituted with any related course, a combination of courses, or prior office experience approved by the program coordinator.

LIBRARY AND INFORMATION SERVICES
AAS, Certificate: SFCC

The Library and Information Services program offers an online AAS degree and an online certificate for library support staff and paraprofessionals who wish to start their career as a library staff member or who wish to further their career development. Students are trained to work in all areas of library service. The program gives students exposure to a broad range of theory and practice common in most libraries. The program at SFCC follows the American Library Association guidelines for library support staff.

Students can enter the program in any quarter; however the recommended course sequence begins fall quarter and library science courses should be taken in sequential order to complete the program as listed in the career planning guide. **Library science classes are online classes**. Electives for the AAS degree program can be taken online or in a traditional classroom. Students engage in online learning and are required to take work experience/internship classes to reinforce hands–on training. The LMLIB 288 COOP Education Work Experience class is a critical component of the degree program as it provides hand on training to reinforce classroom instruction. This class may be taken more than once during fall, winter or spring quarter. Very few of the library science classes require students to purchase textbooks.

The three quarter online certificate program targets persons interested in working in K–12 library settings who do not wish to pursue an AAS degree. Graduates of this program may gain employment as library support staff or paraprofessionals in libraries.

The AAS Educational Paraprofessional School Library Media Technician Emphasis Degree: Students in this degree program can seek employment as paraprofessionals in the classroom or as K–12 library staff. Consult the **Education Paraprofessional, Special Education** career planning guide for more information.

AAS
First Quarter

LMLIB	100	Introduction to Library Organizations and Careers	3
LMLIB	115	Introduction to Library Organizational Systems	5
		Approved Electives [1]	3
		Computer Skills Electives [2]	4
		Total	**15**

Second Quarter

LMLIB	116	Introduction to Circulation Systems and Services	5
LMLIB	125	School Libraries and Media Centers	5
		Communication Skills Electives [3]	5
		Total	**15**

Third Quarter

LMLIB	117	Access and Outreach Services	5
LMLIB	135	Children's Literature and Library Services	5

		Communication Skills Electives [3]	5
		Computer Skills Electives [2]	2
		Total	**17**

Fourth Quarter

LMLIB	210	Technical Services I: Acquisitions and Materials Processing	5
		Approved Electives [1]	3
		Computer Skills Electives [2]	4
		Total	**12**

Fifth Quarter

LMLIB	220	Technical Services II: Cataloging	5
		Approved Electives [1]	5
		Leadership Skills/Human Relations Electives	5
		Total	**15**

Sixth Quarter

LMLIB	222	Reference and Information Services	5
LMLIB	280	Library Employment and Workplace Issues	3
LMLIB	288	Cooperative Education Work Experience (No Seminar) [5]	3
		Computation Skills Electives [4]	5
		Total	**16**

90 credits are required for the AAS

Communication Skills Electives

BT	107	Business Communications [3]	3
BT	108	Business Communications [3]	3
BT	272	Business Correspondence	5
CMST&	101	Introduction to Communication	5
ENGL&	101	English Composition I	5
ENGL&	102	Composition II	5
ENGL&	235	Technical Writing	5

Computation Skills Electives

ACCT	141	QuickBooks	5
BUS	103	Basic Business Math and Electronic Calculators	5
BUS	123	Practical Business Math Applications	5
MATH	090	Pre-Algebra	5
MATH	099	Intermediate Algebra	5
MATH&	107	Math in Society	5

Computer Skills Electives

BT	101	Keyboarding	5
CAPPS	102	Introduction to Office	1
CAPPS	141	Word I	2
CAPPS	151	Excel I	2
CAPPS	161	Access I	2
CAPPS	171	PowerPoint I	2
CAPPS	180	Outlook	2
GENST	108	Learning for the 21st Century	5
IS	120	Business Computer Use	3
IS	160	Internet Fundamentals	1
LMLIB	126	Library Technology and Services for Educational Support	3
MMGT	125	Social Media Marketing	5

Leadership Skills/Human Relations Electives

BUS	280	Human Relations in Business	5
CMST&	210	Interpersonal Communication	5
HS	136	Improving Interpersonal Communication	5
MMGT	101	Principles of Management	5
MMGT	231	Human Resource Management	5
PSYC&	100	General Psychology	5
SOC&	101	Intro to Sociology	5

[1] Students may select elective courses from an Approved Electives list in order to reach the minimum required program credits. Approved electives include courses in ASL, BT, CAPPS, ECED, EDUC, ENGL& 111, HLTH 174, IS, LMLIB, MMGT 223, SPAN. See department for complete list.
[2] Select courses from Computer Skills Electives for a total of 10 credits.
[3] Select two or three courses for a total of 10–11 credits in Communication Skills. If BT 107 is selected students must take BT 108.
[4] Select one course for a total of 5 credits in Computation Skills. Any online MATH course may be substituted.
[5] Students are required to take 3 credits of LMLIB 288 and may take in any quarter with approval of instructor or take in the sixth quarter.

Certificate

First Quarter

EDUC&	204	Exceptional Child [1]	5
LMLIB	100	Introduction to Library Organizations and Careers	3
LMLIB	115	Introduction to Library Organizational Systems	5
		Total	**13**

Second Quarter

LMLIB	125	School Libraries and Media Centers	5
LMLIB	126	Library Technology and Services for Educational Support	3
LMLIB	220	Technical Services II: Cataloging [3]	5
		Total	**13**

Third Quarter

EDUC	252	Social/Emotional Development [2]	5
LMLIB	135	Children's Literature and Library Services	5
LMLIB	280	Library Employment and Workplace Issues	3
LMLIB	288	Cooperative Education Work Experience (No Seminar)	3
		Total	**16**

42 credits are required for the Certificate

[1] EDUC& 204 may be substituted with EDUC& 202.
[2] EDUC 252 or any library science (LMLIB) course, CAPPS course or courses approved by instructor, may be taken for a total of 5 credits.
[3] LMLIB 220 may be substituted with LMLIB 116.

MACHINIST/CNC TECHNOLOGY
AAS, Certificate: SCC

Machinist/CNC Technology AAS Degree: The Machinist/CNC Technology program is designed to provide students with the skills necessary to gain employment in the manufacturing industry. The first year of the program will focus on skills used in a modern machine shop: machine shop math, blueprint reading, and conventional machine tool theory and lab. The last year offers advanced conventional machining and specialized training in CNC theory with introduction to CAD/CAM and procedures in quality control.

Each required course for graduation must be completed with a grade of 2.0 or higher before proceeding to the next quarter.

Machinist/CNC Certificate: This four–quarter evening Machinist/CNC Certificate program prepares students for employment in the machining industry. Basic manual machine operation with emphasis on the safe operation of a variety of machine tools is an integral component of this program. Students receive intensive training in both theory and application of machining skills with introduction to CAD/CAM.

AAS

First Quarter

APLED	112	Applied Mathematics [1]	3
MACH	113	Beginning Blueprint	2
MACH	114	Introduction to Machine Shop I	5
MACH	115	Introduction to Machine Tools	5
MACH	116	Introduction to Machine Shop II	5
		Total	**20**

Second Quarter

CIS	105	Computer Fundamentals for Vocations I [2]	2
EMS	120	Basic First Aid in the Workplace	2
MACH	123	Machine Tool Operations I	6
MACH	124	Blueprint II	2
MACH	125	Machine Shop Math I	2
MACH	126	Machine Tool Operations II	7
		Total	**21**

Third Quarter

APLED	121	Applied Written Communication [1]	4
MACH	133	Machine Tool Operations III	7
MACH	134	Machine Shop Math II	2
MACH	135	Blueprint III	2
MACH	136	Machine Tool Operations IV	7
		Total	**22**

Fourth Quarter

AGGEN	157	Arc Welding	1
APLED	123	Leadership Skills for Business and Industry[1]	3
MACH	244	Blueprint IV	2
MACH	247	CNC Theory	5
MACH	248	CNC Lab	7
MACH	262	CNC Programming	3
		Total	**21**

Fifth Quarter

APLED	125	Employment Preparation [1]	3
MACH	249	Quality Control	4
MACH	250	CNC Production Theory	5
MACH	251	CNC Production Lab	7
MACH	254	Blueprint V	2
		Total	**21**

Sixth Quarter

MACH	201	Manufacturing Economics	1
MACH	202	Manufacturing Resource Management	1
MACH	243	Machine Tool Operations V [3]	8
MACH	246	Machine Tool Operations VI [3]	5
		Total	**15**

120 credits are required for the AAS

[1] This related education requirement may be met by any course or combination of courses approved by the department dean.
[2] CIS 105 may be substituted with CIS 110.
[3] This course may be substituted with MACH 266 and 267 or 288 (no seminar).

Certificate

First Quarter

APLED	112	Applied Mathematics [1]	3
MACH	113	Beginning Blueprint	2
MACH	114	Introduction to Machine Shop I	5
MACH	247	CNC Theory	5
		Total	**15**

Second Quarter

MACH	116	Introduction to Machine Shop II	5
MACH	124	Blueprint II	2
MACH	250	CNC Production Theory	5
MET	103	Introduction to Computers for Technology	2
		Total	**14**

Third Quarter

MACH	123	Machine Tool Operations I	6
MACH	135	Blueprint III	2
MACH	257	Computer Aided Machining	5
		Total	**13**

Fourth Quarter

APLED	125	Employment Preparation [1]	3
MACH	258	Advanced Computer Aided Machining	5
MACH	261	CNC Production Applications	6
		Total	**14**

56 credits are required for the Certificate

[1] This related education requirement may be met by any course or combination of courses approved by the department dean.

MANAGEMENT
AAS, Certificate: SCC

The challenge of management! It takes a special kind of person with a special knack to be a good business manager. Over 70 percent of the workforce in Spokane is employed in the fields of business, health care and marketing. This creates a big demand for entry–level managers and supervisors.

The management program at SCC is designed to prepare students for these positions. The curriculum incorporates individual hands–on experiences while learning the basic principles of business management.

Courses in the AAS degree program include management, business law, project management, computer applications and human relations. In addition to the academic courses, there is an opportunity for team work and leadership experience through participation in College DECA, an international management and marketing organization.

All students graduating from the AAS degree program must have a minimum grade average of 2.0 on each of the required management, accounting, economic, and business courses and a cumulative minimum grade point average on all required courses in the program.

The Management Certificate at SCC is designed to provide students with business, management, and accounting basics with an emphasis on project management skills. Students are prepared to understand the concepts and methods associated with project initiation, planning, execution, monitoring and controlling, and closing phases of project management. Students will utilize computer applications to manage and control project tasks, communication, costs, scheduling, and quality. In addition, this program includes leadership and teambuilding development so vital for successful project management in the workplace. Students can expect to increase job skills for entry–level employment as well as career advancement. All students graduating from the certificate program must have a minimum grade average of 2.0 on each of the required courses in the program.

AAS

Group A-AAS Degree-Basic Business Core	51
Group B-AAS Degree Marketing/ Management Electives	10
Group C-AAS Degree Written Communications Elective	5
Group D-AAS Degree-Management Option Requirements	27
Total	**93**

93 credits are required for the AAS

Group A–AAS Degree–Basic Business Core

ACCT	151	College Accounting I [1]	5
BUS&	101	Intro to Business	5
BUS	104	Business Mathematics [2]	5
BUS	280	Human Relations in Business	5
CATT	120	Microsoft Word I	2.5
CATT	138	Microsoft Excel I	2.5
CMST&	101	Introduction to Communication	5
ECON	100	Fundamentals of Economics [3]	5
ENGL&	101	English Composition I [4]	5
MMGT	100	Supervised Volunteer Experience	1
MMGT	101	Principles of Management	5
MMGT	211	Marketing	5

Group B–AAS Degree Marketing/Management Electives

BUS	120	International Business	5
BUS	140	International Marketing	3
BUS	204	Introduction to Law	5
BUS	284	Special Business Topics	1-5
BUS	285	Special Business Topics	1-5
BUS	286	Special Business Topics	1-5
CATT	242	Advanced Microsoft Project [5]	2.5
MMGT	125	Social Media Marketing	5
MMGT	205	Small Business Planning	5
MMGT	212	Retailing	5
MMGT	218	Fundamentals of Advertising	5
MMGT	223	Customer Service	3
MMGT	232	Project Leadership [6]	5
MMGT	288	Cooperative Education Work Experience (No Seminar)	1-5

Group C–AAS Degree Written Communications Elective

BT	109	Business Communications	5
BT	272	Business Correspondence [7]	5
ENGL&	102	Composition II	5
ENGL&	235	Technical Writing	5

Group D–AAS Degree–Management Option Requirements

BUS&	201	Business Law	5
CATT	139	Microsoft Excel II	2.5
CATT	241	Microsoft Project	2.5
MMGT	181	Leadership Training-DEC [8]	1
MMGT	182	Leadership Training-DEC [9]	1
MMGT	183	Leadership Training-DEC [10]	1
MMGT	231	Human Resource Management	5
MMGT	243	Fundamentals of Project Management	5
MMGT	288	Cooperative Education Work Experience (No Seminar)	4

[1] ACCT 151 may be substituted with ACCT& 201.
[2] BUS 103 or proficiency test is required.
[3] ECON 100 may be substituted with a higher level ECON course.
[4] ENGL& 101 may be substituted with a course from the Group–C–AAS Degree Written Communication Elective.
[5] Previous or concurrent enrollment in CATT 241 is required.
[6] MMGT 232 may be substituted with BUS 280.
[7] BT 109 is a prerequisite to BT 272.
[8] MMGT 181 may be substituted with MMGT 191.
[9] MMGT 182 may be substituted with MMGT 192.
[10] MMGT 183 may be substituted with MMGT 193.

Certificate

First Quarter

ACCT	151	College Accounting I [1]	5
BUS&	101	Intro to Business	5
BUS	103	Basic Business Math and Electronic Calculators [2]	5
		Total	**15**

Second Quarter

CATT	138	Microsoft Excel I	2.5
CATT	139	Microsoft Excel II	2.5
ENGL&	101	English Composition I [3]	5
MMGT	101	Principles of Management	5
		Total	**15**

Third Quarter

CATT	241	Microsoft Project	2.5
MMGT	232	Project Leadership [4]	5
MMGT	243	Fundamentals of Project Management	5
		Group E-Certificate Marketing/ Management Elective	2.5-5
		Total	**15–17.5**

45-47.5 credits are required for the Certificate

Group E–Certificate Marketing/ Management Elective

BUS	120	International Business	5
BUS	140	International Marketing	3
BUS&	201	Business Law	5
BUS	204	Introduction to Law	5
BUS	284	Special Business Topics	1-5
BUS	285	Special Business Topics	1-5
BUS	286	Special Business Topics	1-5
CATT	242	Advanced Microsoft Project [5]	2.5
MMGT	125	Social Media Marketing	5
MMGT	181	Leadership Training-DEC [6]	1
MMGT	182	Leadership Training-DEC [7]	1
MMGT	183	Leadership Training-DEC [8]	1
MMGT	205	Small Business Planning	5
MMGT	212	Retailing	5
MMGT	218	Fundamentals of Advertising	5
MMGT	223	Customer Service	3
MMGT	231	Human Resource Management	5
MMGT	288	Cooperative Education Work Experience (No Seminar)	1-5

[1] ACCT 151 may be substituted with ACCT& 201.
[2] BUS 103 or proficiency test is required.
[3] ENGL& 101 may be substituted with a courses from the Group–C–AAS Degree Written Communication Elective.
[4] MMGT 232 may be substituted with BUS 280.
[5] Previous or concurrent enrollment in CATT 241 is required.
[6] MMGT 181 may be substituted with MMGT 191.
[7] MMGT 182 may be substituted with MMGT 192.
[8] MMGT 183 may be substituted with MMGT 193.

MANAGEMENT
Certificate: SFCC

The Business Management Certificate at Spokane Falls Community College is a hands–on program for those individuals who manage or own their own small business, are interested in starting their own small business, or would like to work in a small business. It provides students with a strong instructional foundation for launching and successfully operating a small business venture.

This certificate program serves as an introduction to business management. The Business Management Certificate program can also serve as preparation for furthering one's education in field of business management. The curriculum spans a variety of stages in small business development, including financial planning, management, sales, marketing, operational management and communications. All these courses will help aid students in acquiring a better understanding of small business management. This professional certificate's capstone course teaches students how to finalize their business plan and practice the next steps regarding executing and managing a successful business.

Certificate

First Quarter

BT	100	Beginning Keyboarding	1
BT	107	Business Communications [1]	3
BUS	100	Money Management	3
BUS	105	Principles of Leadership	3
BUS	122	Practical Business Math	3
MMGT	223	Customer Service	3
		Total	**16**

Second Quarter

BT	108	Business Communications [1]	3
BUS&	101	Intro to Business	5
CAPPS	151	Excel I	2
MMGT	101	Principles of Management	5
		Total	**15**

Third Quarter

MMGT	220	Professional Sales	3
MMGT	229	Introduction to Lean	3
SBM	101	How to Start a Small Business	5
SBM	105	Targeting Your Market	2
		Total	**13**

44 credits are required for the Certificate

[1] CMST& 101 may be substituted for BT 107/108. Total credits for certificate would then be 46 If taking CMST& 101, one additional credit is necessary to achieve 47 credits for this certificate.

MARKETING
AAS: SCC

The Marketing program is designed for students who want to specialize in fields involved with the distribution of goods and services from producer to consumer. Students take core business courses followed by marketing specialty courses such as marketing, retailing, advertising and international business. Students are also required to gain work experience as part of the program. There is opportunity for teamwork and leadership experience through participation in college DECA, international management and marketing organization.

All students graduating from this program must have a minimum grade of 2.0 on each of the management; accounting; economics; and general business required courses. Students must also have a 2.0 cumulative grade point average on all required courses in the program.

AAS

	Basic Business Core	51
	Group A or B Marketing & Management Electives	10
	Group A-Written Communications Elective	5
	Marketing Option Requirements	25
	Total	**91**

91 credits are required for the AAS

Basic Business Core

ACCT	151	College Accounting I [1]	5
BUS&	101	Intro to Business	5
BUS	104	Business Mathematics [2]	5
BUS	280	Human Relations in Business	5
CATT	120	Microsoft Word I	2.5
CATT	138	Microsoft Excel I	2.5
CMST&	101	Introduction to Communication	5
ECON	100	Fundamentals of Economics [3]	5
ENGL&	101	English Composition I	5
MMGT	100	Supervised Volunteer Experience	1
MMGT	101	Principles of Management	5
MMGT	211	Marketing	5

Group A or B Marketing & Management Electives

BUS&	201	Business Law	5
BUS	204	Introduction to Law	5
BUS	284	Special Business Topics	1-5
BUS	285	Special Business Topics	1-5
BUS	286	Special Business Topics	1-5
CATT	241	Microsoft Project	2.5
CATT	242	Advanced Microsoft Project [4]	2.5
MMGT	125	Social Media Marketing	5
MMGT	181	Leadership Training-DEC [5]	1
MMGT	182	Leadership Training-DEC [6]	1
MMGT	183	Leadership Training-DEC [7]	1
MMGT	205	Small Business Planning	5
MMGT	231	Human Resource Management	5
MMGT	232	Project Leadership	5
MMGT	243	Fundamentals of Project Management	5
MMGT	288	Cooperative Education Work Experience (No Seminar)	1-5

Group A–Written Communications Elective

BT	109	Business Communications	5
BT	272	Business Correspondence [8]	5
ENGL&	102	Composition II	5
ENGL&	235	Technical Writing	5

Marketing Option Requirements

BUS	120	International Business	5
BUS	140	International Marketing	3
MMGT	212	Retailing	5
MMGT	218	Fundamentals of Advertising	5
MMGT	223	Customer Service	3
MMGT	288	Cooperative Education Work Experience (No Seminar)	4

[1] ACCT 151 may be substituted with ACCT& 201.
[2] BUS 103 or proficiency test is required.
[3] ECON 100 may be substituted with a higher level ECON course.
[4] Previous or concurrent enrollment in CATT 241 is required.
[5] MMGT 181 may be substituted with MMGT 191.
[6] MMGT 182 may be substituted with MMGT 192.
[7] MMGT 183 may be substituted with MMGT 193.
[8] BT 109 is a prerequisite to BT 272.

MATHEMATICS PRE-MAJOR
AA–DTA: SCC/SFCC

Mathematics is a science basic to all other sciences and is an integral part of our everyday existence. Students pursuing a career in mathematics have many opportunities for interesting jobs depending on their abilities and interests.

Check with transfer institution for specific computer language course requirement. Consult a counselor or academic adviser for recommended courses specific to student's choice of transfer institution.

AA–DTA

	Suggested Courses to Consider [1]	90
	Total	**90**

90 credits are required for the AA–DTA

[1] Consult a counselor or academic adviser for recommended courses specific to student's choice of transfer institution.

MECHANICAL ENGINEERING TECHNOLOGY
AAS: SCC

The Mechanical Engineering Technology program prepares students for an engineering technology career using both CAD drafting and 3–D Solid Modeling techniques. The course of study prepares students to work in a wide range of engineering disciplines, including: engineering teams for large and small manufacturing firms, consultant engineering firms, testing and research companies, etc.

Students learn the design and manufacturing processes required for a product to be developed from initial concept to final production. Students not only learn to draft using CAD and Solid Modeling techniques, but also get "hands–on" practical experience in Rapid Prototyping, live design projects, and by learning fabrication processes used in industry. Coursework includes design and assembly techniques as well as shop practice techniques and shop safety. The course of study includes such basic disciplines of engineering technology as math, physics, statics, and materials science.

AAS

First Quarter

APLED	112	Applied Mathematics [1]	5
APLED	121	Applied Written Communication [2]	4
CAD	105	Basic Blueprint Reading	3
CAD	114	Engineering Graphics 1 [2]	4
MET	101	Introduction to Engineering	2
		Total	**18**

Second Quarter

APLED	123	Leadership Skills for Business and Industry [2]	3
CAD	124	Engineering Graphics 2	5
CAD	129	Computer Aided Drafting	5
MET	123	Applied Technical Mathematics [3]	5
		Total	**18**

Third Quarter

CAD	131	Dimensioning and Tolerancing	3
CAD	132	Engineering Graphics 3	5
CAD	135	Schematics	3
MET	127	Manufacturing Processes	3
MET	133	Introductory Applied Physics [4]	3
		Total	**17**

Fourth Quarter

CAD	241	CAD Solid Modeling	5
CAD	268	Structural CAD Applications	4
MET	242	Mechanical Design Fundamentals	4
MET	247	Shop Practices	2
		Approved Technical Design Electives [5]	5-6
		Total	**20–21**

Fifth Quarter

APLED	125	Employment Preparation [2]	3
CAD	248	Mechanical CAD Applications	4
CAD	252	Advanced CAD	5
MET	255	Technical Applications I [4]	3-5
		Approved Technical Design Electives [5]	5-6
		Total	**20–23**

Sixth Quarter

CAD	261	Project Design	4
ELMT	112	Electrical Theory	5
MET	264	Technical Applications II [4]	3-5
		Approved Technical Design Electives [5]	5-6
		Total	**17–20**

110-117 credits are required for the AAS

Approved Technical Design Electives

CAD	258	Schematic CAD Applications	4
CAD	260	Fabrication and Piping CAD Applications	3
CET	136	Statics	6
CET	253	Strength of Materials	5
ELMT	243	Introduction to Programmable Controllers	4
FLPT	136	Applied Hydraulics/Pneumatics	3
MET	139	Hydraulics/Pneumatics	3
MET	245	Applied Physics [4]	5
MET	250	Strength of Materials/Materials Science	5
MET	254	Statics	5
MET	263	Machine Controls	2
PHYS	100	Introductory Physics	5
PHYS	101	General Physics	5

[1] This related education requirement may be met by any course or combination of courses approved by the instructional dean. This course may be substituted with MET 115 if approved by the division dean.

[2] This related education requirement may be met by any course or combination of courses approved by the instructional dean.

[3] This course may be substituted with MATH 100 if offered with permission of the division dean.

[4] This course may be substituted with MET 266 and 267 or MET 288. Also may be substituted with approved electives for students wanting to receive transfer credits. Note: SCC is not responsible for any other institution accepting transfer credits.

[5] Courses may be selected from the Approved Technical Design Electives list to keep each quarter within the credit range and within the over–all program credits required for an AAS degree.

MEDICAL ASSISTANT
AAS, Certificate: SCC

The Medical Assistant is an Allied Health professional who assists physicians and other health care providers in their offices or other medical settings. In accordance with respective state laws, they perform a broad range of administrative and clinical duties. In the Medical Assistant program at Spokane Community College, students learn about the administrative duties of scheduling and receiving patients, preparing and maintaining medical records, performing basic secretarial skills and medical transcription, handling telephone calls, writing correspondence, serving as a liaison between the physician and other individuals, and managing practice finances. The clinical phase of the program is taught through intense training and hands–on application. Students learn to perform clinical duties, including asepsis and infection control, taking patient histories and vital signs, first aid and CPR, preparing patients for procedures, assisting the physician with examinations and treatments, collecting and processing specimens, performing selected diagnostic tests, and preparing and administering medications as directed by the physician. The Spokane Community College Medical Assistant program is accredited by the Commission on Accreditation of Allied Health Education Programs (www.caahep.org) upon the recommendation of the Curriculum review Board of the American Association of Medical Assistants Endowment (AAMAE). Commission on Accreditation of Allied Health Education Programs 1361 Park Street, Clearwater, Florida 33756, 1(727)210–2350

Admission Requirements:

- Computer Skills
- CIS 110 or equivalent
- ENGL& 101
- Appropriate scores in one of the following: ASSET or COMPASS

A 2.0 grade or better is needed in all required classes before proceeding to the next quarter and before a certificate is awarded. The student may complete requirements in Medical

Assistant and receive a certificate or complete the professional requirements plus liberal arts requirements and receive an associate in applied science degree. The student may enroll in liberal arts either preceding or following the professional curriculum.

AAS

First Quarter

EMS	121	Emergency Management Training for Professionals	3
HED	108	Human Anatomy	5
MA	101	Administrative Medical Assistant I	5
MA	102	Clinical Medical Assistant I	3
		Total	**16**

Second Quarter

HED	125	Medical Terminology	5
MA	111	Administrative Medical Assistant II	3
MA	112	Clinical Medical Assistant II	5
PHARM	115	Mathematics for Pharmacy Technicians	5
		Total	**18**

Third Quarter

HED	109	Human Physiology and Disease	5
HIM	120	Medical Assistant Coding and Reimbursement	3-5
MA	122	Clinical Medical Assistant III: Phlebotomy and IV Therapy	5
MA	125	Ambulatory Care Setting Pharmacology	5
		Total	**18–20**

Fourth Quarter

MA	131	Practice Finances and Management	3
MA	132	Clinical Medical Assistant IV	5
MA	141	Medical Assistant Seminar	1
MA	142	Medical Assistant Externship	6
		Total	**15**

Fifth Quarter

MMGT	101	Principles of Management [1]	5
PSYC&	100	General Psychology [1]	5
SOC&	101	Intro to Sociology [2]	5
		Total	**15**

Sixth Quarter

BUS	280	Human Relations in Business [1]	5
CMST	227	Intercultural Communication [1]	5
ENGL&	102	Composition II [1]	5
		Total	**15**

Seventh Quarter

ACCT&	201	Prin of Accounting I [1]	5
CMST&	210	Interpersonal Communication [1]	5
PSYC	210	Conception through Adolescent Developmental Psychology [1]	5
		Total	**15**

112-114 credits are required for the AAS

[1] Departmentally approved elective numbered 100 or above may be substituted for courses required for the AAS degree.
[2] SOC& 101 may be substituted with SOC& 201.

Certificate

First Quarter

EMS	121	Emergency Management Training for Professionals	3
HED	108	Human Anatomy	5
MA	101	Administrative Medical Assistant I	5
MA	102	Clinical Medical Assistant I	3
		Total	**16**

Second Quarter

HED	125	Medical Terminology	5
MA	111	Administrative Medical Assistant II	3
MA	112	Clinical Medical Assistant II	5
PHARM	115	Mathematics for Pharmacy Technicians	5
		Total	**18**

Third Quarter

HED	109	Human Physiology and Disease	5
HIM	120	Medical Assistant Coding and Reimbursement	3
MA	122	Clinical Medical Assistant III: Phlebotomy and IV Therapy	5
MA	125	Ambulatory Care Setting Pharmacology	5
		Total	**18**

Fourth Quarter

MA	131	Practice Finances and Management	3
MA	132	Clinical Medical Assistant IV	5
MA	141	Medical Assistant Seminar	1
MA	142	Medical Assistant Externship	6
		Total	**15**

67 credits are required for the Certificate

MEDICAL OFFICE BILLING AND CODING SPECIALIST
Certificate: SCC

This program prepares individuals for employment in medical offices as medical office receptionists, coders and insurance billers. Spokane is a major regional center for medical care offering maximum opportunities for employment. Positions are available in medical clinics, medical insurance companies and private physicians' offices.

Admission Requirements:
Keyboarding Skills: 40 wpm with six or fewer errors completed at the SCC testing center or successful completion in BT 101 and 102, current first aid/CPR card or successful completion of EMS 120 or equivalent. Students with math ASSET scores below 30 or math COMPASS test scores below 20 must successfully complete BT 151 during the first quarter.

Certificate

First Quarter

BT	105	Basic Grammar for Business II	5
HED	104	Medical Terminology and Anatomy	5
MSEC	108	Medical Office Computing	5
		Total	**15**

Second Quarter

ACCT	151	College Accounting I	5
BT	231	Office Procedures [1]	5
HED	105	Medical Terminology and Anatomy [2]	5
		Total	**15**

Third Quarter

BUS	103	Basic Business Math and Electronic Calculators [3]	5
MSEC	121	Medical Office Reception [4]	5
MSEC	123	Medical Office Coding [5]	5
		Total	**15**

Fourth Quarter

MSEC	124	Medical Office Insurance Billing [6]	5
MSEC	125	Medical Office Bookkeeping [7]	5
MSEC	223	Medical Office Coding II [8]	5
		Total	**15**

Fifth Quarter

BT	160	Job Preparation Techniques	3
MSEC	120	Human Relations/Communications for Medical Office Personnel	5

MSEC	284	Medical Internship Seminar	1
MSEC	285	Medical Office Reception Internship [9]	2
MSEC	286	Medical Insurance Billing Internship [9]	2
		Total	**13**

73 credits are required for the Certificate

[1] BT 105, keyboarding proficiency.
[2] HED 104.
[3] BUS 103 may be substituted with BT 128.
[4] BT 231 or concurrent enrollment with BT 231.
[5] HED 104, 105 or concurrent enrollment with 105.
[6] Concurrent enrollment with MSEC 125.
[7] ACCT 151, BUS 103, and concurrent enrollment with MSEC 124.
[8] MSEC 123.
[9] All of the courses listed above must be completed before enrolling in an internship. Cooperative education courses may be substituted.

MEDICAL OFFICE RECEPTIONIST
Certificate: SCC

This program prepares individuals for employment in medical offices as medical office receptionists. Spokane is a major regional center for medical care, offering many opportunities for employment. Positions are available in medical clinics, medical insurance companies and private physicians' offices.

Admission Requirements:
Keyboarding Skills: 40 wpm with six or fewer errors completed at the SCC testing center or successful completion in BT 101 and 102, current first aid/CPR card or successful completion of EMS 120 or equivalent. Students with math ASSET scores below 30 or math COMPASS test scores below 20 must successfully complete BT 151 during the first quarter. A student can be admitted to this program at the beginning of any quarter.

Certificate

First Quarter

BT	105	Basic Grammar for Business II	5
HED	104	Medical Terminology and Anatomy	5
MSEC	108	Medical Office Computing	5
		Total	**15**

Second Quarter

BT	231	Office Procedures [1]	5
HED	105	Medical Terminology and Anatomy [2]	5
MSEC	121	Medical Office Reception [3]	5
		Total	**15**

Third Quarter

BT	160	Job Preparation Techniques	3
MSEC	120	Human Relations/Communications for Medical Office Personnel	5
MSEC	284	Medical Internship Seminar	1
MSEC	285	Medical Office Reception Internship [4]	3
		Total	**12**

42 credits are required for the Certificate

[1] BT 105, keyboarding proficiency
[2] HED 104.
[3] BT 231 or concurrent with BT 231
[4] All of the courses listed above must be completed before enrolling in an internship. Cooperative education may be substituted.

MEDICAL OFFICE SPECIALIST
AAS: SCC

This program prepares individuals for employment in medical offices. Spokane is a major regional center for medical care offering many opportunities for employment. Positions are available in medical clinics, medical insurance companies and private physicians' offices.

Admission Requirements:
Keyboarding Skills: 40 wpm with six or fewer errors completed at the SCC testing center or successful completion in BT 101 and 102, current first aid/CPR card or successful completion of EMS 120 or equivalent. Students with math ASSET scores below 30 or math COMPASS test scores below 20 must successfully complete BT 151 during the first quarter. A student can be admitted to this program at the beginning of any quarter.

Students must complete all classes with a 2.0 grade or higher.

AAS

First Quarter

BT	105	Basic Grammar for Business II	5
HED	104	Medical Terminology and Anatomy	5
MSEC	108	Medical Office Computing	5
		Total	**15**

Second Quarter

ACCT	151	College Accounting I	5
BT	102	Document Processing	5
HED	105	Medical Terminology and Anatomy [1]	5
		Total	**15**

Third Quarter

BT	231	Office Procedures [2]	5
BUS	103	Basic Business Math and Electronic Calculators [3]	5
MSEC	120	Human Relations/Communications for Medical Office Personnel	5
MSEC	123	Medical Office Coding [4]	5
		Total	**20**

Fourth Quarter

MSEC	121	Medical Office Reception [5]	5
MSEC	223	Medical Office Coding II [6]	5
MSEC	240	Medical Office Transcription [7]	5
		Total	**15**

Fifth Quarter

BT	160	Job Preparation Techniques	3
MSEC	124	Medical Office Insurance Billing [8]	5
MSEC	125	Medical Office Bookkeeping [9]	5
MSEC	241	Medical Office Transcription [10]	5
		Total	**18**

Sixth Quarter

BT	260	Administrative Office Management	5
MA	107	Basic Medical Assisting	3
MSEC	284	Medical Internship Seminar	1
MSEC	285	Medical Office Reception Internship [11]	2
MSEC	287	Medical Specialist Internship [11]	2
		Total	**13**

96 credits are required for the AAS

[1] HED 104
[2] BT 105, keyboarding proficiency
[3] BUS 103 may be substituted with BT 128.
[4] HED 104, 105 or concurrent enrollment with 105.
[5] BT 231 or concurrent with BT 231.

[6] MSEC 123
[7] Typing test 40 wpm
[8] Concurrent enrollment with MSEC 125
[9] ACCT 151, BUS 103 and concurrent enrollment with MSEC 124
[10] MSEC 240
[11] All of the courses listed above must be completed before enrolling in an internship. Cooperative education may be substituted.

MEDICAL TRANSCRIPTION
AAS: SCC

This educational program in medical transcription prepares the student for entry–level employment as a medical transcriptionist. This program provides the basic knowledge, understanding and skills required to transcribe medical dictation with accuracy, clarity and timeliness, applying the principles of professional and ethical conduct. Students will also edit documents generated by speech recognition. The final quarter offers practical application of medical transcription in a hospital, clinic or medical transcription service environment.

Students must achieve at least a 2.0 grade point in all courses.

AAS

First Quarter

BT	105	Basic Grammar for Business II	5
BUS	103	Basic Business Math and Electronic Calculators [1]	5
HED	104	Medical Terminology and Anatomy	5
		Total	**15**

Second Quarter

BT	109	Business Communications	5
HED	105	Medical Terminology and Anatomy	5
MSEC	131	Fundamentals of Medical Word Processing	5
		Total	**15**

Third Quarter

HED	109	Human Physiology and Disease [2]	5
MSEC	132	Medical Transcription I	10
		Total	**15**

Fourth Quarter

HED	145	Pharmacology	3
MSEC	123	Medical Office Coding	5
MSEC	133	Medical Transcription II	10
		Total	**18**

Fifth Quarter

CMST&	210	Interpersonal Communication [3]	5
MSEC	134	Speech Recognition/Editing	5
MSEC	223	Medical Office Coding II	5
		Total	**15**

Sixth Quarter

BT	160	Job Preparation Techniques	3
MSEC	150	Medical Transcription Practicum	8
MSEC	284	Medical Internship Seminar	1
		Total	**12**

90 credits are required for the AAS

[1] BUS 103 may be substituted with BT 128.
[2] HED 109 may be substituted with HED 129.
[3] CMST& 210 may be substituted with MSEC 120.

MEDICINE PRE-MAJOR
AA–DTA, Associate in Biology DTA/MRP: SCC/SFCC

Usually a bachelor's degree is required for admission to medical school –however, some schools now consider students after completion of their junior year. Competition for admission is intense; a high overall college grade point average must be maintained.

AA–DTA

	Suggested Courses to Consider [1]	90
	Total	**90**

90 credits are required for the AA–DTA

Associate in Biology DTA/MRP

	Suggested Courses to Consider [1]	90
	Total	**90**

90 credits are required for the Associate in Biology DTA/MRP

[1] Consult a counselor or academic adviser for recommended courses specific to student's choice of transfer institution.

MULTI-OCCUPATIONAL TRADES
AAS: SCC

The primary function of the Multi–Occupational Trades apprenticeship program is to train and produce journey–level workers who meet the stringent requirements of each individual trade. This is accomplished through a combination of technical skills obtained in an approved apprenticeship program (a minimum of 6,000 clock hours); the theory and practical applications learned in apprenticeship–related courses (450 clock hours); and instruction received in related education and elective courses.

This program is open only to apprentices enrolled in a local JATC–approved apprenticeship training program. Verification of completion of an apprenticeship program by the JATC is required before submission of the petition for graduation. The combined total of 23–25 program credits, 6000 OJT hours, and 450 hours of related training will meet the 30–hour residency requirements of AAS degree candidates.

AAS

450 Theory Clock Hours	0
6000 Technical Clock Hours	0
Elective [1]	10
Related Education [2]	13-15
Total	**23–25**

23-25 credits are required for the AAS

Elective

CIS	110	Introduction to Computer Applications	5
MMGT	205	Small Business Planning	5

Related Education

APLED	112	Applied Mathematics	3-4
APLED	121	Applied Written Communication	4
APLED	123	Leadership Skills for Business and Industry	3-4
APLED	125	Employment Preparation	3

[1] These are recommended electives. Substitutions must be approved by the JATC.
[2] These related education requirements may be met by any course or combination of courses approved for substitution by the instructional dean.

MUSIC (ASSOCIATE IN FINE ARTS DEGREE)
AFA: SFCC

The Associate of Fine Arts (AFA) in Music offers a foundation for students pursuing a four year degree in Music, either a Bachelor of Arts (BA) or Bachelor of Music (BM). To complete the AFA, students complete 60 credits of Music and 40 credits of General Education Requirements. Courses satisfying General Education Requirements must include ENGL& 101 (5 credits); MATH& 107 (5 credits); Social Science (5 credits), Non Lab Science (5 credits); and Lab Science (5 credits). The additional 15 General Education Requirements credits will be determined based on your transfer destination and in consultation with an academic adviser in Music.

With the AFA, students transfer with a minimum of 90 credits to colleges and universities SFCC maintains articulation agreements with. University Music Departments may require an audition for admission to Music programs. Through ensemble experience and private applied instruction, the AFA provides students the opportunity to audition successfully. Students must maintain a cumulative GPA of 2.0 or better.

AFA

First Quarter

MUSC&	141	Music Theory I	5
MUSC	176	Beginner Piano Class I	2
MUSC	180	Private Lessons	1
		Ensemble [1]	2
		General Education Requirement [2]	5
		Total	**15**

Second Quarter

MUSC&	142	Music Theory II	5
MUSC	177	Beginner Piano Class II	2
MUSC	180	Private Lessons	1
		Ensemble [1]	2
		General Education Requirement [2]	10
		Total	**20**

Third Quarter

MUSC&	143	Music Theory III	5
MUSC	178	Beginner Piano Class III	2
MUSC	180	Private Lessons	1
		Ensemble [1]	2
		General Education Requirement [2]	5
		Total	**15**

Fourth Quarter

MUSC&	241	Music Theory IV	5
MUSC	276	Advanced Piano Class I	2
MUSC	280	Private Lessons	1
		Ensemble [1]	2
		General Education Requirement [2]	5
		Total	**15**

Fifth Quarter

MUSC&	242	Music Theory V	5
MUSC	277	Advanced Piano Class II	2
MUSC	280	Private Lessons	1
		Ensemble [1]	2
		General Education Requirement [2]	10
		Total	**20**

Sixth Quarter

MUSC&	243	Music Theory VI	5
MUSC	278	Advanced Piano Class III	2
MUSC	280	Private Lessons	1
		Ensemble [1]	2
		General Education Requirement [2]	5
		Total	**15**

100 credits are required for the AFA

[1] You may earn ensemble credit through participation in Choir, Orchestra, Concert Band, Jazz Band, Jazz Combos, and Jazz Choir. To select appropriate ensembles, it is essential you meet with a faculty academic adviser in Music. Not all ensembles transfer to all colleges and universities. So it is important you select the ensembles transferable to the four year institution you wish to attend.

[2] General Education Requirements must include ENGL& 101, MATH& 107, a social science, a non-lab science course and a lab science course. Additional General Education Requirements are necessary as determined by your transfer destination. Please speak with a Music Academic Adviser.

NATURAL RESOURCE MANAGEMENT
AAS: SCC

The associate in applied science degree in Natural Resource Management prepares students to work in the forestry area. This program is conditionally accredited by the Society of American Foresters. Two additional options are available: Parks and Recreation or Wildlife Fisheries. The Parks and Recreation option prepares students for park maintenance and/or interpretive positions. The Wildlife/Fisheries option prepares students to perform field sampling as well as habitat restoration work.

Students must obtain a minimum COMPASS score of Math 1 32, Writing 54 and Reading 72 to enter the program.

All students must complete an internship of at least 400 hours to complete the degree.

Second year: Student may remain in the main program which is forestry based, or they may select one of the two options for an AAS degree which requires a total of 105 credits.

AAS

Natural Resource Management

First Quarter

ENVS	110	Plant Biology	5
NATRS	112	Natural Resources Mathematical Applications [1]	5
NATRS	120	Basic Computer Applications in Natural Resources	2
NATRS	202	Dendrology	5
NATRS	225	Natural Resources Occupational Experience	1
		Total	**18**

Second Quarter

ENVS	207	Wildlife Biology	5
NATRS	122	Natural Resources Trigonometric Applications	5
NATRS	215	Forest Measurements	5
NATRS	225	Natural Resources Occupational Experience	2
WATER	120	Hydrologic Technical and Field Reports [2]	5
		Total	**22**

Third Quarter

NATRS	130	Chainsaw Operation, Maintenance and Safety	3
NATRS	201	Forest Protection	5
NATRS	204	Maps and Aerial Photo Interpretation	5
NATRS	205	Surveying	5
		Total	**18**

Fourth Quarter

NATRS	203	Forest Harvesting and Products	5
NATRS	209	Silviculture	5
NATRS	216	Forest Inventory	5

NATRS	225	Natural Resources Occupational Experience [3]	1
		Total	**16**

Fifth Quarter

ENVS	104	Environmental Conservation	5
ENVS	210	Environmental Soil Science	5
NATRS	220	Introduction to Geographic Information Systems for Natural Resources	4
NATRS	225	Natural Resources Occupational Experience [3]	1
NATRS	230	Global Positioning Systems	3
		Total	**18**

Sixth Quarter

ENVS	208	Outdoor Recreation and Interpretation	3
NATRS	221	Applications in Geographic Information Systems	5
		Elective [4]	5
		Total	**13**

105 credits are required for the AAS

[1] Must pass with a 1.7 or higher grade before advancing into NATRS 122.
[2] Approved written communication courses at the level of 100 or higher may be substituted.
[3] A 400 hour internship, either paid or volunteer, must have been completed before registering for this course.
[4] Electives may include any liberal arts, career or technical course number 100 or higher and are acceptable for an AA degree.

Parks and Recreation Option
First Quarter

ENVS	110	Plant Biology	5
NATRS	112	Natural Resources Mathematical Applications [1]	5
NATRS	120	Basic Computer Applications in Natural Resources	2
NATRS	202	Dendrology	5
NATRS	225	Natural Resources Occupational Experience	1
		Total	**18**

Second Quarter

ENVS	207	Wildlife Biology	5
NATRS	215	Forest Measurements	5
NATRS	225	Natural Resources Occupational Experience	2
WATER	120	Hydrologic Technical and Field Reports [2]	5
		Elective [5]	5
		Total	**22**

Third Quarter

ENVS	104	Environmental Conservation	5
NATRS	130	Chainsaw Operation, Maintenance and Safety	3
NATRS	201	Forest Protection	5
NATRS	204	Maps and Aerial Photo Interpretation	5
		Total	**18**

Fourth Quarter

AGGEN	156	Equipment Operation and Maintenance	2
CMST&	101	Introduction to Communication	5
NATRS	209	Silviculture	5
NATRS	225	Natural Resources Occupational Experience [3]	1
		Elective [5]	3
		Total	**16**

Fifth Quarter

ENVS	210	Environmental Soil Science	5
NATRS	220	Introduction to Geographic Information Systems for Natural Resources	4
NATRS	225	Natural Resources Occupational Experience [3]	1
NATRS	230	Global Positioning Systems	3
		Elective [4]	3
		Total	**16**

Sixth Quarter

AGGEN	151	Shop Skills	4
ENVS	208	Outdoor Recreation and Interpretation	3
ENVS	237	Bird Identification	3
		Elective [5]	5
		Total	**15**

105 credits are required for the AAS

[1] Must pass with a 1.7 or higher grade before advancing into NATRS 122.
[2] Approved written communication courses at the level of 100 or higher may be substituted.
[3] A 400 hour internship, either paid or volunteer, must have been completed before registering for this course.
[4] Electives may include any liberal arts, career or technical course number 100 or higher and are acceptable for an AA degree.
[5] Electives must be AGGEN, AGHRT, ENVS or WATER courses.

Wildlife/Fisheries Option
First Quarter

ENVS	110	Plant Biology	5
NATRS	112	Natural Resources Mathematical Applications [1]	5
NATRS	120	Basic Computer Applications in Natural Resources	2
NATRS	202	Dendrology	5
NATRS	225	Natural Resources Occupational Experience	1
		Total	**18**

Second Quarter

ENVS	207	Wildlife Biology	5
NATRS	122	Natural Resources Trigonometric Applications	5
NATRS	215	Forest Measurements	5
NATRS	225	Natural Resources Occupational Experience	2
WATER	120	Hydrologic Technical and Field Reports [2]	5
		Total	**22**

Third Quarter

NATRS	201	Forest Protection	5
NATRS	204	Maps and Aerial Photo Interpretation	5
NATRS	205	Surveying	5
		Total	**15**

Fourth Quarter

ENVS	217	Field Sampling Techniques	4
NATRS	209	Silviculture	5
NATRS	217	Freshwater Fisheries Biology	5
NATRS	225	Natural Resources Occupational Experience [3]	1
		Total	**15**

Fifth Quarter

ENVS	210	Environmental Soil Science	5
NATRS	220	Introduction to Geographic Information Systems for Natural Resources	4

NATRS	225	Natural Resources Occupational Experience [3]	1
NATRS	230	Global Positioning Systems	3
WATER	209	Water Quality	5
		Total	**18**

Sixth Quarter

ENVS	227	Advanced Wildlife Biology	4
ENVS	237	Bird Identification	3
NATRS	221	Applications in Geographic Information Systems	5
		Elective [4]	5
		Total	**17**

105 credits are required for the AAS

[1] Must pass with a 1.7 or higher grade before advancing into NATRS 122.
[2] Approved written communication courses at the level of 100 or higher may be substituted.
[3] A 400 hour internship, either paid or volunteer, must have been completed before registering for this course.
[4] Electives may include any liberal arts, career or technical course number 100 or higher and are acceptable for an AA degree.

NETWORK DESIGN AND ADMINISTRATION
AAS, Certificate: SCC

The Network Design and Administration program prepares students as local–and wide–area network administrators. Successful completion of the program provides students with the essential skills of network administration including network design, implementation, maintenance, optimization, and troubleshooting, utilizing a variety of network operating systems, and hardware platforms and protocols. These include but are not limited to Microsoft, Cisco and UNIX. Upon completion, students have covered objectives leading toward professional certification. Effective oral and written communications are emphasized throughout the program.

Degree Prerequisites/Requirements:
- Completion of BT 101 Keyboarding or keyboarding challenge through testing center
- CIS 110 or permission of Department Chair

All required courses must be completed with a grade of 2.0 or better before proceeding to the next quarter or before a diploma is awarded.

AAS

First Quarter

CIS	201	PC Hardware-A+	5
CIS	205	Windows Client OS	5
ENGL&	101	English Composition I	5
		Total	**15**

Second Quarter

CIS	244	Windows Server	5
CIS	250	Cisco Network Fundamentals	5
CIS	271	Server and Introduction to Wireless Technologies	5
		Math Elective [1]	5
		Total	**20**

Third Quarter

CIS	206	Introduction to Linux/Unix	5
CIS	236	Windows Server Networking	5
CIS	251	Cisco Routing	5
		Communication Elective [2]	5
		Total	**20**

Fourth Quarter

BT	280	Project Management for the Office	2.5
CIS	213	Advanced Linux/Unix	5
CIS	234	Network Scripting	3
CIS	252	Cisco Switching	5
		Total	**15.5**

Fifth Quarter

BT	160	Job Preparation Techniques	3
CIS	247	Systems Management	5
CIS	253	Cisco WAN Technologies	5
CIS	263	Exchange Server Administration	5
		Total	**18**

Sixth Quarter

CIS	270	Principles of Network Security	5
CIS	275	Networking Capstone	5
CIS	286	Voice Over IP	5
		Total	**15**

103.5 credits are required for the AAS

Communication Elective

BUS	280	Human Relations in Business	5
CMST&	210	Interpersonal Communication	5
CMST	227	Intercultural Communication	5
CMST&	230	Small Group Communication	5
CMST	250	Managing Conflict Through Communication	5
ENGL	120	Applied Technical Writing for Vocations	3-5
ENGL&	235	Technical Writing	5

Math Elective

BUS	217	Business Statistics	5
MATH&	107	Math in Society	5
MATH&	141	Precalculus I	5
MATH	201	Introduction to Finite Mathematics	5
PHIL&	106	Intro to Logic	5

[1] Select from the math elective group.
[2] Select from the communication elective group.

Certificate

Certificate

First Quarter

CIS	201	PC Hardware-A+	5
CIS	205	Windows Client OS	5
ENGL&	101	English Composition I	5
		Total	**15**

Second Quarter

CIS	244	Windows Server	5
CIS	250	Cisco Network Fundamentals	5
CIS	271	Server and Introduction to Wireless Technologies	5
		Math Elective [1]	5
		Total	**20**

Third Quarter

CIS	206	Introduction to Linux/Unix	5
CIS	236	Windows Server Networking	5
CIS	251	Cisco Routing	5
		Communication Elective [2]	5
		Total	**20**

55 credits are required for the Certificate

Communication Elective

BUS	280	Human Relations in Business	5
CMST&	210	Interpersonal Communication	5
CMST	227	Intercultural Communication	5
CMST&	230	Small Group Communication	5

CMST	250	Managing Conflict Through Communication	5
ENGL	120	Applied Technical Writing for Vocations	3-5
ENGL&	235	Technical Writing	5

Math Elective

BUS	217	Business Statistics	5
MATH&	107	Math in Society	5
MATH&	141	Precalculus I	5
MATH	201	Introduction to Finite Mathematics	5
PHIL&	106	Intro to Logic	5

[1] Select from the math elective group.
[2] Select from the communication elective group.

CISCO NETWORKING
First Quarter

CIS	250	Cisco Network Fundamentals	5
CIS	251	Cisco Routing	5
CIS	252	Cisco Switching	5
CIS	253	Cisco WAN Technologies	5
		Total	**20**

20 credits are required for the Certificate

INTRODUCTION TO NETWORKING
First Quarter

CIS	205	Windows Client OS	5
CIS	240	Introduction to Networks	5
		Total	**10**

10 credits are required for the Certificate

MICROSOFT NETWORKING
First Quarter

CIS	205	Windows Client OS	5
CIS	236	Windows Server Networking	5
CIS	244	Windows Server	5
CIS	263	Exchange Server Administration	5
		Total	**20**

20 credits are required for the Certificate

UNIX NETWORKING
First Quarter

CIS	206	Introduction to Linux/Unix	5
CIS	213	Advanced Linux/Unix	5
		Total	**10**

10 credits are required for the Certificate

NONINVASIVE CARDIOVASCULAR TECHNOLOGY/ ECHOCARDIOGRAPHY
AAS: SCC

Noninvasive Cardiovascular Technology/Echocardiography is an Allied Health profession specifically concerning the diagnosis and treatment of patients with cardiac and peripheral vascular disease. The technologist performs examinations at the request or direction of a physician. Through subjective sampling and/or recording, the technologist proceeds with the examination to create an easily definable foundation of data from which a correct anatomic and physiologic diagnosis may be established for each patient.

The primary role of the noninvasive cardiovascular technologist/echocardiography is to obtain recordings of ultrasound images of the heart and related structures for the physician to interpret. The various types of ultrasound equipment require a highly skilled operator to obtain the imaging information or other data required. The noninvasive cardiovascular technologist/echocardiographer must obtain appropriate clinical history, cardiac–related physical findings, and pertinent laboratory data in order to adapt the imaging techniques to obtain comprehensive and diagnostic echocardiographic information. The Cardiovascular Technology Programs (Invasive and Noninvasive) are accredited by the Commission on Accreditation of Allied Health Education Programs (www.caahep.org) upon the recommendation of the Joint Review Committee for Cardiovascular Technology (www.jrccvt.org). JRC–CVT 6 Pine Knoll Dr. Beverly, MA 01915–1425 (978) 456–5594. Students within the non–invasive cardiovascular technology/echocardiography program are required to complete a six month, full–time clinical internship. As clinical space is limited in Spokane and the surrounding area, the student may be required to complete their internship in an out–of–town and/or out–of–area medical center.

Admission Recommendations/Requirements:

- Active e–mail account recommended
- Computer skills recommended
- CHEM 120; CHEM& 121; HED 125; PHYS 100; PHYS 120 are recommended
- Appropriate scores in ASSET or COMPASS required
- Immunizations and drug screening and National background check are required after being accepted into the program.
- A 2.0 grade must be maintained quarterly in every course before proceeding to the next quarter.
- Students may repeat a noninvasive course once, but it must be repeated within two years.
- High school diploma or GED certificate required.
- Interview with cardiovascular technology instructor required

Program Prerequisites:

- All math and science prerequisites must have been completed within the last five years with a grade of 2.0 or better.

AAS
Prerequisites:

– BIOL&	160	General Biology w/Lab [1]	
– BIOL&	241	Human A & P 1 [1]	
– BIOL&	242	Human A & P 2 [1]	
– CMST	127	Leadership Development	
– ENGL&	101	English Composition I	
– MATH	099	Intermediate Algebra [1]	

First Quarter

ECHO	100	Introduction to Echo and Vascular	2
ECHO	112	Vascular Fundamentals	4
ECHO	113	Electrophysiology	4
ECHO	116	Acute Coronary Syndrome	1
ECHO	117	Cardiovascular Pharm 1	1
ECHO	125	Ultrasound Physics and Instrumentation I	5
		Total	**17**

Second Quarter

ECHO	122	Vascular Procedures I	4
ECHO	126	Hemodynamics	2
ECHO	127	Technical Skills/Reading Hemodynamics	1
ECHO	128	Cardiovascular Pharm 2	1
ECHO	129	Technical Skills/Pharmacology	1
ECHO	133	Echo Fundamentals	5
ECHO	135	Ultrasound Physics and Instrumentation II	5
		Total	**19**

Third Quarter

ECHO	131	Core Concepts in Echo Vasc	2
ECHO	136	Comparative Imaging Analysis	3
ECHO	138	Cardiovascular Physiology	4
ECHO	253	Echocardiography I	6
ECHO	254	Technical Skills Echocardiography I	2
		Total	**17**

Fourth Quarter

ECHO	139	Surgical Asepsis	1
ECHO	140	Technical Skills/Surgical Asepsis	1
ECHO	141	Data Collection and Presentation	3
ECHO	142	Echo Clinical Preparation	4
ECHO	143	Echo Clinical I	6
		Total	**15**

Fifth Quarter

ECHO	251	Echocardiography Clinical II	6
ECHO	252	Cardiovascular Pathophysiology	1
ECHO	255	Research Methods & Biostatistics	3
ECHO	263	Echocardiography II	7
ECHO	264	Technical Skills Echo II	2
		Total	**19**

Sixth Quarter

ECHO	261	Echocardiography Clinical III	14
		Total	**14**

Seventh Quarter

ECHO	273	Echocardiography Clinical IV	14
		Total	**14**

115 credits are required for the AAS

[1] All math and science courses must have been completed within the last five years and must have been completed with a grade point of 2.0 or better.

NURSING PRE-MAJOR
Associate in Pre–Nursing DTA/MRP: SCC/SFCC

The Associate in Pre–Nursing DTA/MRP degree is a statewide is a statewide articulated transfer degree agreement for nursing majors between the community colleges and most four–year institutions. This degree shall only be granted to students who have earned a cumulative grade point average of at least 2.0. Students will enter the four–year institution at junior standing. Admission to Washington four–year institutions' schools of nursing is not guaranteed to students holding a DTA/MRP degree. **It is highly recommended that students meet with a counselor or academic adviser** at Spokane Community College, Spokane Falls Community College or the Institute for Extended Learning on a regular basis to be sure that requirements specified in this degree are met. Students should also seek academic advising at the four–year institution to which they plan to transfer early in their educational planning to learn about additional requirements and procedures for admission.

Use this program outline in conjunction with the degree worksheet which shows a full course listing for each distribution area. Consult a counselor or academic adviser for recommended courses specific to student's choice of transfer institution.

NOTE: Students should always check with the receiving university for additional requirements. Most have competitive admissions and require one year of residency at their institution.

Associate in Pre–Nursing DTA/MRP
First Quarter

CHEM&	121	Intro to Chemistry: w/Lab	5
ENGL&	101	English Composition I	5
HLTH	174	First Aid [1]	3
		Total	**13**

Second Quarter

CHEM&	122	Intro to Organic Chem: w/Lab	5
ENGL&	102	Composition II	5
		Health-Related/PE/Recreational/ Leisure - Group B [1]	2
		Required Math: UW & Seattle University transfers	0-5
		Total	**12–17**

Third Quarter

CHEM&	123	Intro to Biochemistry: w/Lab	5
		Humanities Group A, B or C [2]	5
		Quantitative/Symbolic Reasoning Requirement	5
		Total	**15**

Fourth Quarter

BIOL&	160	General Biology w/Lab	5
CMST&	101	Introduction to Communication	5
SOC&	101	Intro to Sociology [3]	5
		Total	**15**

Fifth Quarter

BIOL&	241	Human A & P 1	5
PSYC&	100	General Psychology	5
		Humanities Group A, B or C [2]	5
		Total	**15**

Sixth Quarter

BIOL&	242	Human A & P 2	5
BIOL&	260	Microbiology	5
PSYC&	200	Lifespan Psychology	5
		Total	**15**

Seventh Quarter

NUTRI	251	Nutrition	5
		Humanities Group A, B or C [2]	5
		Social Sciences - Group B Requirement [4]	5
		Total	**15**

100-105 credits are required for the Associate in Pre–Nursing DTA/MRP

Health–Related/PE/Recreational/Leisure – Group A

ART	122	Health and Safety in Art	1
HLTH	101	Health and Wellness	3
HLTH	104	Stress Management	3
HLTH	174	First Aid	3
PE	170	Introduction to Physical Education and Recreation	3

Quantitative/Symbolic Reasoning Requirement

BUS	217	Business Statistics	5
MATH	221	Introduction to Probability and Statistics	5

Required Math: UW & Seattle University transfers

MATH&	141	Precalculus I	5

[1] Minimum of 5cr and two courses are required. Minimum of one course from Group A. Minimum of one course from Group B. HLTH 174 may be substituted with any course in Group A.
[2] A total of 15cr required in 3 subject areas. Courses must be selected from Groups A, B, or C with no more than two from any one group. No more than 5cr in foreign language or ASL. Refer to Associate in pre–Nursing DTA/MRP degree worksheet for full list of courses and credit requirements in each distribution area.
[3] SOC& 101 may be substituted with SOC& 201.
[4] Refer to Associate in pre–Nursing DTA/MRP degree worksheet for full list of courses and credit requirements in each distribution area.

NURSING PROGRAM (RN, LPN)
AAS, Certificate: SCC

The AAS degree program prepares graduates for entry level nursing practice in a variety of health care settings. The key components of professionalism, collaboration, clinical decision making, caring and management of care provide the framework for graduate outcomes.

After the first quarter, students are eligible to take the Washington State exam for the Nursing Assistant Certified (NAC). After completion of the second quarter, students are eligible for employment as Nurse Technicians. After the completion of the first four quarters of the Nursing program, students have the option of obtaining an LPN certificate and taking the NCLEX–PN ® licensure examination. After successful completion of seven quarters students graduate with an AAS degree and may take the NCLEX–RN ® licensure examination.

The program is approved by the Washington Nursing Care Quality Assurance Commission.

Please refer to the two segments of prerequisites on the following typical student schedule and read the corresponding footnotes at the end of the schedule. Only the final six prerequisites (BIOL& 241,242,260, ENGL& 101, PSYC& 100, 200) are included within the total credits required for the AAS Degree (107.5 credits) and Certificate (74.5 credits) although all prerequisites are required. Once all prerequisite requirements are met, please contact the Health Sciences counselor in SCC Building 9 to review your transcripts and be advised regarding placement on the list for the Nursing program.

Program requirements once the student is accepted into the Nursing program (forms are available in the Health Sciences division office, Building 9, room 133):

- Proof of Immunizations or titers indicating immunity for measles, mumps, rubella, chicken pox.
- Proof of Immunization for Tdap (tetanus, diphtheria, pertussis) within the last ten years.
- Proof of two tuberculin skin tests if no test within the prior 12 months, otherwise proof of annual tuberculin skin tests for the last three years; OR QuantiFERON serum test within the last year. If you have a history of a positive tuberculin skin test, please provide proof of chest X–ray and negative symptom check from healthcare provider within the past 12 months.
- Hepatitis B (HBV) vaccine highly recommended OR sign declination waiver.
- Annual Flu Vaccination highly recommended OR sign declination waiver.
- American Heart Association Health Care Provider CPR card issued within the last year (must be renewed annually).
- Satisfactory criminal background check (completed annually).
- Evidence of current medical insurance (must be renewed quarterly).
- Drug screening may be required depending on where you are placed for clinical experience and the requirements of the clinical agency.

Students seeking advanced standing, such as LPNs or students transferring in from another college must have official transcript(s) sent to the SCC transcript department and ask the Health Sciences counselor to evaluate their transfer–in credits. Once advanced placement is determined, the student should apply for the Nursing program through the new student entry office as an advanced student. Advanced standing determination does not guarantee acceptance into the Nursing program and acceptance will be determined on advanced standing quarterly openings.

AAS

Prerequisites:			
– BIOL&	160	General Biology w/Lab [1]	
– CHEM&	121	Intro to Chemistry: w/Lab [1]	
– MATH	096	Introductory Algebra [1]	
– SURG	105	Blood-borne Pathogens and HIV/AIDS [2]	
BIOL&	241	Human A & P 1 [3]	5
BIOL&	242	Human A & P 2 [3]	5
BIOL&	260	Microbiology [3]	5
ENGL&	101	English Composition I [3]	5
PSYC&	100	General Psychology [3]	5
PSYC&	200	Lifespan Psychology [3]	5
		Total	**30**
First Quarter			
NURS	116	Nursing Foundations [4]	9
NURS	121	Cultural Diversity in Health Care	1
		Total	**10**
Second Quarter			
NURS	125	Introduction to Medical Surgical Nursing Across the Lifespan	8
NURS	126	Pharmacology For Nurses	2
		Total	**10**
Third Quarter			
NURS	131	Intravenous Therapy Concepts	1.5
NURS	135	Maternal Newborn Nursing	5
NURS	136	Mental Health Nursing	5
		Total	**11.5**
Fourth Quarter			
NURS	141	Professional/Vocational Relationships	1
NURS	145	Medical Surgical Nursing Across the Lifespan	12
		Total	**13**
Fifth Quarter			
NURS	215	Advanced Medical Surgical Nursing Across the Lifespan I [5]	10
		Total	**10**
Sixth Quarter			
NURS	225	Advanced Medical Surgical Nursing Across the Lifespan II	10
NURS	226	Health Care Management	2
		Total	**12**
Seventh Quarter			
NURS	235	Advanced Medical Surgical Nursing Across the Lifespan III	11
		Total	**11**

107.5 credits are required for the AAS

[1] Course must be completed with a 2.5 grade or higher & is a prerequisite to the 30 credits of prerequisites required for an AAS Degree or Certificate. Completion of all prerequisites does not ensure admission into the program. This course may be satisfied by an alternate method, such as ASSET/COMPASS test, ALEKS math test, or high School Advanced Placement classes in accordance with the CCS college catalog, etc., as discussed with an SCC counselor.

[2] Blood–borne pathogens and HIV/AIDS must meet the Washington State requirement of 7 hours of content and may be accomplished at an outside agency; please discuss the outside agency with the Health Sciences counselor in Bldg. 9. Completion of this course is a prerequisite to acceptance into the Nursing program. Because of the number of applicants for this program, the completion of all prerequisites does not ensure admission into the program at the next available quarter.

[3] This prerequisite course is included in the AAS Degree and the Certificate and must have been completed within the last ten years with a 2.5 grade or higher. All prerequisite courses must be completed before the student can apply for the nursing program. Because of the number of applicants for this program, the completion of all prerequisites does not ensure the admission into the program at the next available quarter.
[4] Once enrolled in NURS 116, the student must complete the first year within three years.
[5] Once enrolled in NURS 215, the student must complete the second year within three years.

Certificate
Prerequisites:

– BIOL&	160	General Biology w/Lab [1]	
– CHEM&	121	Intro to Chemistry: w/Lab [1]	
– MATH	096	Introductory Algebra [1]	
– SURG	105	Blood-borne Pathogens and HIV/AIDS [2]	
BIOL&	241	Human A & P 1 [3]	5
BIOL&	242	Human A & P 2 [3]	5
BIOL&	260	Microbiology [3]	5
ENGL&	101	English Composition I [3]	5
PSYC&	100	General Psychology [3]	5
PSYC&	200	Lifespan Psychology [3]	5
		Total	**30**

First Quarter

NURS	116	Nursing Foundations [4]	9
NURS	121	Cultural Diversity in Health Care	1
		Total	**10**

Second Quarter

NURS	125	Introduction to Medical Surgical Nursing Across the Lifespan	8
NURS	126	Pharmacology For Nurses	2
		Total	**10**

Third Quarter

NURS	131	Intravenous Therapy Concepts	1.5
NURS	135	Maternal Newborn Nursing	5
NURS	136	Mental Health Nursing	5
		Total	**11.5**

Fourth Quarter

NURS	141	Professional/Vocational Relationships	1
NURS	145	Medical Surgical Nursing Across the Lifespan	12
		Total	**13**

74.5 credits are required for the Certificate

[1] Course must be completed with a 2.5 grade or higher & is a prerequisite to the 30 credits of prerequisites required for an AAS Degree or Certificate. Completion of all prerequisites does not ensure admission into the program. This course may be satisfied by an alternate method, such as ASSET/COMPASS test, ALEKS math test, or high School Advanced Placement classes in accordance with the CCS college catalog, etc., as discussed with an SCC counselor.
[2] Blood–borne pathogens and HIV/AIDS must meet the Washington State requirement of 7 hours of content and may be accomplished at an outside agency; please discuss the outside agency with the Health Sciences counselor in Bldg. 9. Completion of this course is a prerequisite to acceptance into the Nursing program. Because of the number of applicants for this program, the completion of all prerequisites does not ensure admission into the program at the next available quarter.
[3] This prerequisite course is included in the AAS Degree and the Certificate and must have been completed within the last ten years with a 2.5 grade or higher. All prerequisite courses must be completed before the student can apply for the nursing program. Because of the number of applicants for this program, the completion of all prerequisites does not ensure the admission into the program at the next available quarter.
[4] Once enrolled in NURS 116, the student must complete the first year within three years.

OCCUPATIONAL THERAPY ASSISTANT
AAS: SFCC

The Associate of Applied Science Degree will prepare students for positions in the health and rehabilitation profession as Occupational Therapy Assistants. Occupational Therapy Assistants work under the direction of Occupational Therapists and provide services to patients and assist them in carrying out activities and exercises developed from a treatment plan. Occupational Therapy Assistants work with individuals in need of rehabilitation who have mental, physical, emotional or developmental impairments. The goal of the program is to provide students with the knowledge, skills, and experiences required of an Occupational Therapy Assistant. This includes the knowledge and competencies required by any health care professional as well as specific skills, knowledge and experiences specific to rehabilitation services.
The OTA program incorporates a selective process for admission. This process uses a point system based on coursework and experience as outlined in the application. Please be aware that the completion of all prerequisites does not ensure admission to the program.

Admission Requirements:

- Completion of the online Occupational Therapy Assistant Program Application Booklet. Applications are accepted during the winter quarter preceding fall quarter entry into the program. See the booklet for specific due dates. Entry into the program is only one time a year, Fall quarter.
- Appropriate placement scores in assessment tests for ENGL& 101 and Math.
- Preferably a minimum of 2.0 in BIOL& 241.
- Documentation of paid or volunteer experience in a medical setting (40 hour minimum volunteer hours under supervision of OT or OTA, students graded to 100 hours).
- Completion of 3 essay questions related to occupational therapy.
- Professional Reference (mailed separately to Dean's office).
- If application is complete, student will be required to participate in a group interview/activity session prior to selection.
- Upon acceptance, current immunizations and passing of physical examination, drug screening and Washington State Patrol criminal background check.

AAS
Prerequisites:

– BIOL&	241	Human A & P 1
– ENGL&	101	English Composition I [1]
– MATH	094	Algebra II [2]
– PSYC&	100	General Psychology

First Quarter

OTA	101	Foundation of Occupational Therapy	3
OTA	102	Occupational Therapy Terminology	1
OTA	106	Regional Human Anatomy and Physiology	5
OTA	110	OTA Procedures	1
OTA	111	Activity Analysis	3
OTA	120	OTA Procedures Lab	2
		Total	**15**

Second Quarter

OTA	103	Applied Anatomy	1
OTA	104	Survey of Pathophysiology	5
OTA	105	Introduction to Neuroscience	4
OTA	113	Occupational Therapy Principles	3
OTA	123	Applied Anatomy Lab	2
		Total	**15**

Third Quarter

OTA	107	Human Development Through the Lifespan	2
OTA	112	Occupational Performance and Physical Disabilities	3
OTA	114	Therapeutic Activities	3
OTA	122	Occupational Performance and Physical Disabilities Lab	2
OTA	124	Therapeutic Activities Lab	2
OTA	127	Human Development Through the Lifespan Lab	1
OTA	151	Level I Clinical Fieldwork I	1
OTA	161	Level I Clinical Fieldwork I Seminar	1
		Total	**15**

Fourth Quarter

OTA	202	Group Dynamics	2
OTA	203	Management for the Occupational Therapist	2
OTA	210	Occupational Performance and Mental Health	3
OTA	212	Occupational Performance and Children	3
OTA	220	Occupational Performance and Mental Health Lab	2
OTA	232	Group Dynamics Lab	1
OTA	242	Occupational Performance and Children Lab	2
OTA	251	Level I Clinical Fieldwork II	1
OTA	261	Level I Clinical Fieldwork II Seminar	1
		Total	**17**

Fifth Quarter

OTA	201	Issues in Occupational Therapy and Health Care	2
OTA	221	Occupational Performance and Aging	3
OTA	231	Occupational Performance and Aging Lab	2
OTA	252	Level I Clinical Fieldwork III	1
OTA	253	Level II Clinical Fieldwork I	6
OTA	263	Fieldwork II Seminar	1
		Total	**15**

Sixth Quarter

OTA	253	Level II Clinical Fieldwork I	4
OTA	254	Level II Clinical Fieldwork II	10
OTA	263	Fieldwork II Seminar	1
		Total	**15**

92 credits are required for the AAS

[1] ENGL& 101 may be substituted with ENGL 105 or ENGL& 235.
[2] MATH 094 may be substituted with MATH 092, MATH 096, MATH& 107 or BUS 103.

OCEANOGRAPHY PRE-MAJOR
AA–DTA, Associate in Biology DTA/MRP: SCC/SFCC

Oceanography encompasses all the sciences, thus courses in geology, biology, chemistry and physics are useful. Practicing oceanographers tend to specialize by emphasizing one of these sciences and thus become biological oceanographers, chemical oceanographers, etc. During the first two years of college, students planning a career in oceanography should complete general college requirements and acquire a strong background in mathematics and science.

AA–DTA

		Suggested Courses to Consider [1]	90
		Total	**90**

90 credits are required for the AA–DTA

Associate in Biology DTA/MRP

		Suggested Courses to Consider [1]	90
		Total	**90**

90 credits are required for the Associate in Biology DTA/MRP

[1] Consult a counselor or academic adviser for recommended courses specific to student's choice of transfer institution.

OFFICE ASSISTANT
Certificate: SCC

The Office Assistant Certificate is a two–quarter program preparing students for entry–level positions. Students completing this program are prepared to format correspondence and reports; write routine letters, emails and memos; and perform a variety of duties depending on the office situations.

In order to earn an Office Assistant certificate, a student must maintain a 2.0 GPA in all individual courses.

Certificate
First Quarter

BT	101	Keyboarding	5
BT	105	Basic Grammar for Business II	5
BT	151	Business Student Preparation	5
		Total	**15**

Second Quarter

BT	102	Document Processing [1]	5
BT	109	Business Communications	5
BT	160	Job Preparation Techniques	3
BUS	103	Basic Business Math and Electronic Calculators [2]	5
CATT	102	Introduction to Outlook	2.5
		Total	**20.5**

35.5 credits are required for the Certificate

[1] Keyboarding proficiency of 30 wpm for three minutes with no more than six errors is a prerequisite for BT 102.
[2] BUS 103 may be substituted with BT 128.

OFFICE ASSISTANT
Certificate: SFCC

The Office Assistant Certificate, a three–quarter program of study, prepares students for entry–level office positions. Students receiving this certificate possess skills in keyboarding and formatting, computer software applications, records management, beginning bookkeeping procedures, business communications and electronic calendaring.

Students are prepared to greet customers, make and receive telephone calls, format correspondence and reports, maintain business files, and perform general office duties as assigned.

Certificate
First Quarter

BT	101	Keyboarding [1]	5
BT	107	Business Communications [2]	3
BUS	122	Practical Business Math [3]	3

GENST	114	Thriving In College	2
IS	160	Internet Fundamentals	1
		Total	**14**

Second Quarter

ACCT	103	Fundamental Bookkeeping Procedures [4]	3
BT	102	Document Processing	5
BT	108	Business Communications [2]	3
		CAPPS Electives	4
		Total	**15**

Third Quarter

BT	155	Records Information Management	3
BT	160	Job Preparation Techniques	3
BT	231	Office Procedures	5
BT	272	Business Correspondence	5
CAPPS	180	Outlook	2
		Total	**18**

47 credits are required for the Certificate

CAPPS Electives

CAPPS	151	Excel I	2
CAPPS	161	Access I	2
CAPPS	171	PowerPoint I	2

[1] Students may take BT 102 if they possess keyboarding skills at 35 wpm and knowledge of business document formatting. Permission of instructor is recommended.
[2] ENGL& 101 may be substituted. If ENGL& 101 is substituted, one additional credit is required for a total of 47 credits for this certificate.
[3] BUS 123 may be substituted for BUS 122.
[4] ACCT& 201 may be substituted for ACCT 103.

OFFICE CLERK
Certificate: SCC

The Office Clerk Certificate is a one–quarter program preparing students for entry–level positions. Students completing this program are prepared to format correspondence and reports, greet callers, make and receive telephone calls in a professional way, use e–mail effectively, maintain electronic calendars, and perform a variety of duties depending on the office situations.

In order to earn an Office Clerk certificate, a student must maintain a 2.0 GPA in all individual courses.

Certificate
First Quarter

BT	102	Document Processing [1]	5
BT	105	Basic Grammar for Business II	5
BT	231	Office Procedures	5
CATT	102	Introduction to Outlook	2.5
		Total	**17.5**

17.5 credits are required for the Certificate

[1] Keyboarding proficiency of 30 wpm for three minutes with no more than six errors is a prerequisite for BT 102.

OFFICE INFORMATION SYSTEMS
AAS: SCC

The Office Information Systems program combines training in information processing, information systems, and office administration to give students the diversified training and background needed to hold positions of responsibility in business offices. Students are trained to use word processing, spreadsheet, database, presentation, web page development and project management software. Because using computer systems to manage information is the fundamental role of administrative office professionals, this program gives students a technical overview of office information systems, basic computer hardware and network administration. Advanced classes provide students with office procedures, project management and office management training.

In order to earn an Office Information Systems AAS degree, a student must maintain a 2.0 GPA in all individual courses.

AAS
First Quarter

BT	102	Document Processing	5
BT	105	Basic Grammar for Business II	5
BT	151	Business Student Preparation	5
BUS	103	Basic Business Math and Electronic Calculators [1]	5
		Total	**20**

Second Quarter

BT	109	Business Communications	5
BT	165	Word Processing	5
CATT	102	Introduction to Outlook	2.5
MMGT	223	Customer Service	3
		Total	**15.5**

Third Quarter

ACCT&	201	Prin of Accounting I [2]	5
BT	160	Job Preparation Techniques	3
BT	231	Office Procedures	5
		Elective	5
		Total	**18**

Fourth Quarter

BT	201	Information Processing	5
BT	250	Information Technology	5
BT	272	Business Correspondence	5
CIS	138	Home Networking	2.5
		Total	**17.5**

Fifth Quarter

BT	202	Advanced Information Processing	5
BT	260	Administrative Office Management	5
CATT	222	Advanced Microsoft Access I	2.5
CATT	223	Advanced Microsoft Access II	2.5
CIS	139	Small Office Home Office Computer Basics	2.5
		Total	**17.5**

Sixth Quarter

BT	263	Integrated Office Applications	5
BT	280	Project Management for the Office	2.5
BT	285	Administrative Professional Internship	2
CATT	128	Desktop Publishing	5
CATT	241	Microsoft Project	2.5
		Total	**17**

105.5 credits are required for the AAS

Elective

ACCT	141	QuickBooks	1-5
BUS&	201	Business Law	5
BUS	204	Introduction to Law	5
BUS	280	Human Relations in Business	5
CMST&	210	Interpersonal Communication	5

[1] BUS 103 may be substituted with BT 128.
[2] ACCT& 201 may be substituted with ACCT 151.

OFFICE SOFTWARE SPECIALIST
Certificate: SCC

Students enrolled in this four–quarter certificate program are trained to use word processing, spreadsheet, database and presentation software; students also format and proofread manuscripts, tables, reports, correspondence and other documents. Computers have become an integral part of every office. The ability to learn and apply software functions is important for all office workers.

In order to earn an Office Software Specialist certificate, a student must maintain a 2.0 GPA in all individual courses.

Certificate

First Quarter

BT	102	Document Processing	5
BT	105	Basic Grammar for Business II	5
BT	151	Business Student Preparation	5
		Total	**15**

Second Quarter

BT	109	Business Communications	5
BT	165	Word Processing	5
BUS	103	Basic Business Math and Electronic Calculators [1]	5
CATT	102	Introduction to Outlook	2.5
		Total	**17.5**

Third Quarter

BT	160	Job Preparation Techniques	3
BT	201	Information Processing	5
BT	231	Office Procedures	5
MMGT	223	Customer Service	3
		Total	**16**

Fourth Quarter

BT	202	Advanced Information Processing	5
BT	250	Information Technology	5
CATT	128	Desktop Publishing	5
		Total	**15**

63.5 credits are required for the Certificate

[1] BUS 103 may be substituted with BT 128.

ORTHOTIC-PROSTHETIC TECHNICIAN
AAS, Certificate: SFCC

Orthotics and Prosthetics is the design and fabrication of braces and artificial limbs and is one of today's rapidly growing health–related professions. Advancing materials technology and an increasing demand for orthotic–prosthetic services has led to an increase in the amount of technical support needed. There are many opportunities for the students completing a formal training program in orthotics and prosthetics.

The primary objective is to train students in the general fabrication procedures of orthotic and prosthetic devices, which include working with plastic, metal, leather, plaster, and orthotic and prosthetic components. Subjects covered include related human anatomy, technology of materials, hand and power tools, equipment, and laboratory safety.

A certificate is awarded at the completion of the Orthotics program and at the completion of the Prosthetics program. An associate in applied science degree in Orthotics and Prosthetics is granted to students who successfully complete both programs.

AAS

		General Education Courses [1]	18
		Total	**18**

First Quarter

OR-PR	111	Prosthetic Tools and Materials	4
OR-PR	112	Related Human Anatomy	3
OR-PR	114	Below Knee Prosthetics	10
		Total	**17**

Second Quarter

OR-PR	122	Related Anatomy of the Above Knee Amputation	3
OR-PR	124	Advanced Below Knee Prosthetics	4
OR-PR	126	Above-the-Knee Prosthetics	10
		Total	**17**

Third Quarter

OR-PR	132	Related Anatomy (Upper Extremity)	2
OR-PR	134	Below Elbow Prosthetics	8
OR-PR	136	Above Elbow Prosthetics	7
		Total	**17**

Fourth Quarter

OR-PR	138	Clinical Prosthetics	6
		Total	**6**

Fifth Quarter

OR-PR	141	Orthopedic Equipment and Materials	4
OR-PR	142	Spinal Anatomy Related to Orthotics	3
OR-PR	144	Spinal Orthotics	10
		Total	**17**

Sixth Quarter

OR-PR	152	Foot and Ankle Skeletal Structure	3
OR-PR	154	Orthotic Shoe Fabrications	4
OR-PR	156	Ankle-Foot Orthosis	10
		Total	**17**

Seventh Quarter

OR-PR	162	Related Anatomy for the Above Knee Orthotics	1
OR-PR	164	Above the Knee Orthotics	8
OR-PR	172	Upper Extremity Anatomy Related to Orthotics	1
OR-PR	174	Upper Extremity Orthotics	7
		Total	**17**

Eighth Quarter

OR-PR	178	Clinical Orthotics	6
		Total	**6**

132 credits are required for the AAS

General Education Courses

BT	107	Business Communications	3
BUS	103	Basic Business Math and Electronic Calculators	5
CMST	121	Job Communication Skills	2
HLTH	174	First Aid	3
HS	136	Improving Interpersonal Communication	5
MATH	035	The Metric System	1

[1] A total of 18 general education course credits are required for the AAS degree.

Certificate
Orthotics

		General Education Courses [1]	9
		Total	**9**

First Quarter

OR-PR	141	Orthopedic Equipment and Materials	4
OR-PR	142	Spinal Anatomy Related to Orthotics	3
OR-PR	144	Spinal Orthotics	10
		Total	**17**

Second Quarter

OR-PR	152	Foot and Ankle Skeletal Structure	3
OR-PR	154	Orthotic Shoe Fabrications	4
OR-PR	156	Ankle-Foot Orthosis	10
		Total	**17**

Third Quarter

OR-PR	162	Related Anatomy for the Above Knee Orthotics	1
OR-PR	164	Above the Knee Orthotics	8
OR-PR	172	Upper Extremity Anatomy Related to Orthotics	1
OR-PR	174	Upper Extremity Orthotics	7
		Total	**17**

Fourth Quarter

OR-PR	178	Clinical Orthotics	6
		Total	**6**

66 credits are required for the Certificate

General Education Courses

BT	107	Business Communications	3
BUS	103	Basic Business Math and Electronic Calculators	5
CMST	121	Job Communication Skills	2
HLTH	174	First Aid	3
HS	136	Improving Interpersonal Communication	5
MATH	035	The Metric System	1

[1] A total of 9 general education course credits are required for a certificate.

Prosthetics

		General Education Courses [1]	9
		Total	**9**

First Quarter

OR-PR	111	Prosthetic Tools and Materials	4
OR-PR	112	Related Human Anatomy	3
OR-PR	114	Below Knee Prosthetics	10
		Total	**17**

Second Quarter

OR-PR	122	Related Anatomy of the Above Knee Amputation	3
OR-PR	124	Advanced Below Knee Prosthetics	4
OR-PR	126	Above-the-Knee Prosthetics	10
		Total	**17**

Third Quarter

OR-PR	132	Related Anatomy (Upper Extremity)	2
OR-PR	134	Below Elbow Prosthetics	8
OR-PR	136	Above Elbow Prosthetics	7
		Total	**17**

Fourth Quarter

OR-PR	138	Clinical Prosthetics	6
		Total	**6**

66 credits are required for the Certificate

General Education Courses

BT	107	Business Communications	3
BUS	103	Basic Business Math and Electronic Calculators	5
CMST	121	Job Communication Skills	2
HLTH	174	First Aid	3
HS	136	Improving Interpersonal Communication	5
MATH	035	The Metric System	1

[1] A total of 9 general education course credits are required for a certificate.

OUTPATIENT MEDICAL CODER
Certificate: SCC

This program offers a one–year certificate and prepares students to work with health information in a range of settings including physicians' offices, nursing facilities, ambulatory care clinics and health insurance agencies. Training in realistic work environments include coding and abstracting clinical data, managing computer databases, health–related legal principles and policies, and knowledge of the Health Insurance Portability and Accountability Act (HIPAA) regulations. Upon completion of the program, students are eligible to take the national Certified Coding Associate (CCA) certification exam offered by the American Health Information Management Association (AHIMA). A GPA of 2.0 or higher must be maintained in all classes.

Certificate
First Quarter

CMST&	210	Interpersonal Communication	5
		Total	**5**

Second Quarter

HED	109	Human Physiology and Disease	5
		Total	**5**

Third Quarter

HED	129	Pathophysiology	5
		Total	**5**

Fourth Quarter

BUS	103	Basic Business Math and Electronic Calculators	5
CMST	227	Intercultural Communication	5
		Total	**10**

25 credits are required for the Certificate

PARALEGAL
AAS, Certificate: SCC

This regionally respected ABA approved program consists of basic and specialty courses designed to prepare students for employment in the legal services field. An AAS degree is awarded after completion of 90–98 credits of required coursework (depending on the math requirement). If full class loads are taken each quarter, the program requires 6–8 quarters to complete. Most specialty classes are taught early morning or evening. The supervised legal work experience required for graduation or the internship must be approved by the program coordinator. Ask a counselor or faculty adviser about transfer articulation agreements with four–year institutions.

Note: A Paralegal graduate does not receive a license to practice law; thus performing legal work directly for the public or giving legal advice directly to the public constitutes the unauthorized practice of law.

Students working toward the AA degree for transfer to a four–year institution should consult individually with an adviser or counselor for planning the AA degree program. For information on AA degree requirements, refer to the Degree and Certificate Requirements section of this catalog. More information on specific transfer programs can be found in the academic programs section of this catalog. A grade of 2.0 or higher in each class (including prerequisites) is required for both the AAS degree and the Certificate degree.

Students should begin early to meet the prerequisites for LA 120 Law Office Computing, which are 2 approved college level computer classes. Notice to students: There is a difference between how the college structures its classes and credits (five credit quarter model) and the American Bar Association's minimum credit requirements for approved programs with respect to General Education courses (semester model credits converted to SCC's quarter system). Generally the result is a student will be required to complete 30 credits of General Education (GE) classes to fulfill the student's 27 GE credit minimum as required by the ABA.

To enter the Paralegal Certificate program, students must have completed an A.A. degree or an A.A.S. degree in Legal Secretary and/or an A.A.S. degree in Legal Administrative Assistant and/or a B.A. degree and/or a B.S. degree from an accredited college and/or university.

AAS

Prerequisites:

– BT	109	Business Communications [1]	

Basic Courses [2]	26
General Education Courses [2]	27-30
Other Courses [2]	0-5
Specialty Courses-AAS [3]	29
Supervised Legal Work Experience [4]	8
Total	**90–98**

90-98 credits are required for the AAS

Basic Courses

BUS	204	Introduction to Law [5]	5
LA	100	Legal Careers Orientation	1
LA	101	Introduction to Paralegalism	2
LA	105	Washington and Idaho Court Rules	3
LA	110	Legal Research and Writing [6]	5
LA	118	Instrument Drafting	3
LA	120	Law Office Computing [7]	5
LA	130	Legal Ethics	1
LA	135	Professional Effectiveness	1

General Education Courses

ENGL&	101	English Composition I [2]	5
MATH&	107	Math in Society [8]	5

Other Courses

BUS	104	Business Mathematics [9]	5

Specialty Courses–AAS

ACCT	151	College Accounting I [10]	5
ACCT&	201	Prin of Accounting I [10]	5
HED	104	Medical Terminology and Anatomy [11]	5
HED	105	Medical Terminology and Anatomy [11]	5
LA	201	Introduction to Probate [11]	3
LA	207	Domestic Relations and Estate Law [11]	3
LA	211	Debtor-Creditor and Bankruptcy [11]	3
LA	215	Commercial Transaction [11]	3
LA	217	Business Organizations [11]	3
LA	218	Employment Law [11]	3
LA	219	Criminal Law and Procedure [11]	3
LA	220	Torts [11]	3
LA	221	Property and Real Estate Transactions I [11]	3
LA	225	Trial Preparation and Procedures [11]	3
LA	230	Insurance Law [11]	3
LA	240	Special Issues Seminar [12]	1-10
LA	285	Legal Office Internship [13]	1-3

Supervised Legal Work Experience

LA	245	Supervised Legal Work Experience [4]	8

[1] Prior to acceptance into the course of study leading to the AAS degree in paralegal studies, students must either achieve a 60 percentile/42 scaled score or better on the written section of the college's assessment test or receive a 2.0 grade or better in BT 109. BT 109 may be substituted with ENGL& 101 if completed with a grade of 2.0 or better.

[2] See department program coordinator for additional list of courses. English& 101 is a prerequisite for LA 110, but is not a requirement for the certificate program.

[3] Specialty courses must total 29 credits for the AAS degree.

[4] Students must complete 8 credits.

[5] BUS 204 is required for the AAS degree only.

[6] Prerequisites are ENGL& 101 and LA 101.

[7] Prerequisites are LSEC 239 and a college–level computer course recommended to be selected from the BT, CIS, or LSEC departments' offerings.

[8] MATH& 107 may be substituted with other courses selected from a list provided by the instructor.

[9] If the student chooses BUS 104 as a math requirement, students must complete an additional 5 credits from the list of communication, social science, or humanities electives.

[10] ACCT& 201 may be substituted with ACCT 151.

[11] Prerequisites for all Legal Specialty Courses: LA 100.

[12] Because each course is different, LA 240 may be repeated as frequently as desired and all credits received may be applied toward the specialty credit requirements for this degree.

[13] Maximum of 3 credits of internship may be applied toward this degree.

Certificate

Basic Courses	21
General Education Courses [1]	10
Other Courses [2]	0-5
Specialty Courses-Certificate [3]	24
Supervised Legal Work Experience [4]	8
Total	**63–68**

63-68 credits are required for the Certificate

Basic Courses

BUS	204	Introduction to Law	5
LA	100	Legal Careers Orientation	1
LA	101	Introduction to Paralegalism	2
LA	105	Washington and Idaho Court Rules	3
LA	110	Legal Research and Writing [5]	5
LA	118	Instrument Drafting	3
LA	120	Law Office Computing [6]	5
LA	130	Legal Ethics	1
LA	135	Professional Effectiveness	1

General Education Courses

ENGL&	101	English Composition I [7]	5
MATH&	107	Math in Society [8]	5

Other Courses

BUS	104	Business Mathematics [2]	5

Specialty Courses–Certificate

ACCT	151	College Accounting I [9]	5
ACCT&	201	Prin of Accounting I [9]	5
BUS	204	Introduction to Law [10]	5
HED	104	Medical Terminology and Anatomy [10]	5
HED	105	Medical Terminology and Anatomy [10]	5

LA	201	Introduction to Probate [10]	3
LA	207	Domestic Relations and Estate Law [10]	3
LA	211	Debtor-Creditor and Bankruptcy [10]	3
LA	215	Commercial Transaction [10]	3
LA	217	Business Organizations [10]	3
LA	218	Employment Law [10]	3
LA	219	Criminal Law and Procedure [10]	3
LA	220	Torts [10]	3
LA	221	Property and Real Estate Transactions I [10]	3
LA	225	Trial Preparation and Procedures [10]	3
LA	230	Insurance Law [10]	3
LA	240	Special Issues Seminar [11]	1-10
LA	285	Legal Office Internship [12]	1-3

Supervised Legal Work Experience

LA	245	Supervised Legal Work Experience [4]	8

[1] 5 credits in Social Science and/or Humanities are required for the Certificate program only. Please see department program coordinator for additional list of courses.
[2] If the student chooses BUS 104 as a math requirement, student must complete an additional 5 credits from the list of communication, social science, or humanities electives.
[3] Prerequisites for all Legal Specialty Courses: LA 100.
[4] Students must complete 8 credits.
[5] Prerequisites are ENGL& 101 and LA 101.
[6] Prerequisites are LSEC 239 and a college–level computer course recommended to be selected from the BT, CIS, or LSEC departments' offerings.
[7] See department program coordinator for additional list of courses. English& 101 is a prerequisite for LA 110, but is not a requirement for the certificate program.
[8] MATH& 107 may be substituted with other courses selected from a list provided by the instructor.
[9] ACCT& 201 may be substituted with ACCT 151.
[10] Specialty courses must total 24 credits for the certificate.
[11] Because each course is different, LA 240 may be repeated as frequently as desired and all credits received may be applied toward the specialty credit requirements for this degree.
[12] Maximum of 3 credits of internship may be applied toward this degree.

PHARMACY PRE-MAJOR
AA–DTA, Associate in Biology DTA/MRP: SCC/SFCC

Pharmacists have a vast number of career opportunities including community and hospital pharmacies, manufacturing industry, medical representatives, sales people and researchers. Pharmacists must be scientifically motivated and be able to work with orderliness and precision. Pharmacists are university graduates who have successfully completed the state pharmacy board examination and have a license to practice.

AA–DTA

Suggested Courses to Consider [1]	90
Total	**90**

90 credits are required for the AA–DTA

Associate in Biology DTA/MRP

Suggested Courses to Consider [1]	90
Total	**90**

90 credits are required for the Associate in Biology DTA/MRP

[1] Consult a counselor or academic adviser for recommended courses specific to student's choice of transfer institution.

PHARMACY TECHNICIAN
AAS, Certificate: SCC

The Pharmacy Technician program trains students in all phases of the pharmacy field: drug products, calculations, dosages, dispensing techniques, inventory management, and Washington pharmacy law. Graduates will be prepared to work in both community and hospital pharmacy settings.

Each required course for graduation must be completed with a 2.0 grade or better before proceeding to the next quarter and must be maintained in all classes. The student may enroll in liberal arts either preceding or following the professional curriculum. For an associate in applied science degree, the student must complete 30 credit hours of required courses and 7 hours of department approved electives numbered 100 or above in addition to the one–year professional curriculum.

Admission Prerequisite Requirements:

- High school diploma or GED certificate
- Washington State Patrol (WSP) background check
- Typing test with a score of 35–40 wpm or completion of BT 101 within the last 5 years
- Interview with pharmacy technician instructor
- Three letters of recommendation
- Appropriate scores on one of the following: ASSET or COMPASS
- Students may repeat a pharmacy technician class once, but it must be repeated within two years
- Each required course for graduation must be completed with a 2.0 grade or better before proceeding to the next quarter
- If the student does not pass a winter quarter class and has to repeat the class the next year, they must also pass the technique skills for the lab portion of PHARM 123 and 124.

AAS

Electives [1]	7
Required Courses for AAS Degree	30
Total	**37**

First Quarter

HED	108	Human Anatomy	5
HED	125	Medical Terminology	5
PHARM	101	Introduction to Pharmacy Technician	3
PHARM	115	Mathematics for Pharmacy Technicians	5
PHARM	119	Pharmacology	3
		Total	**21**

Second Quarter

CMST	127	Leadership Development	3
ENGL	189	Writing for Vocational Students	2
PHARM	122	Advanced Pharmacology	5
PHARM	123	Hospital Pharmacy Dispensing and Management	5
PHARM	124	Community Pharmacy Dispensing and Management	3
PHARM	131	Pharmacy Law and Ethics	3
		Total	**21**

Third Quarter

HED	121	Cultural Diversity in Health Care	1
PHARM	130	Entering the Work Environment	2
PHARM	132	Community Pharmacy	6
PHARM	133	Hospital Pharmacy	6
		Total	**15**

94 credits are required for the AAS

Optional Electives to Consider

BUS&	101	Intro to Business	5
BUS	280	Human Relations in Business	5
ENGL&	102	Composition II	5
MATH&	107	Math in Society	5
MMGT	101	Principles of Management	5
SOC	211	Marriage and the Family	5

Required Courses for AAS Degree

CIS	110	Introduction to Computer Applications	5
CMST&	210	Interpersonal Communication	5
CMST	227	Intercultural Communication	5
ENGL&	101	English Composition I	5
PSYC&	100	General Psychology	5
SOC&	101	Intro to Sociology	5

[1] Departmentally approved elective numbered 100 or above.

Certificate

First Quarter

HED	108	Human Anatomy	5
HED	125	Medical Terminology	5
PHARM	101	Introduction to Pharmacy Technician	3
PHARM	115	Mathematics for Pharmacy Technicians	5
PHARM	119	Pharmacology	3
		Total	**21**

Second Quarter

CMST	127	Leadership Development	3
ENGL	189	Writing for Vocational Students	2
PHARM	122	Advanced Pharmacology	5
PHARM	123	Hospital Pharmacy Dispensing and Management	5
PHARM	124	Community Pharmacy Dispensing and Management	3
PHARM	131	Pharmacy Law and Ethics	3
		Total	**21**

Third Quarter

HED	121	Cultural Diversity in Health Care	1
PHARM	130	Entering the Work Environment	2
PHARM	132	Community Pharmacy	6
PHARM	133	Hospital Pharmacy	6
		Total	**15**

57 credits are required for the Certificate

PHILOSOPHY PRE-MAJOR
AA–DTA: SCC/SFCC

Philosophy is the study of fundamental intellectual problems concerning reality, knowledge, reason, and value, and classical and contemporary attempts at their solution. It is hoped that the reading of classical treatments will make the student sensitive to the problems in their historic dimensions and that knowledge of related contemporary literature will encourage students to participate in the development of their own critical faculties.

AA–DTA

	Suggested Courses to Consider [1]	90
	Total	**90**

90 credits are required for the AA–DTA

[1] Consult a counselor or academic adviser for recommended courses specific to student's choice of transfer institution.

PHOTOGRAPHY
AAS: SFCC

Founded in 1965, the photography program at Spokane Falls Community College is an intensive two–year study of visual communications. Students explore career opportunities in commercial photography and multimedia production and have opportunities to interact with industry through field trips, guest speakers and cooperative work experiences.

First–year students learn the fundamentals of lighting and composition while surveying career fields. Second–year students complete projects with real world scenarios and focus on prevailing trends in the world of digital media production.

In addition to teaching technical skills and artistic design, the program stresses positive work habits and helps students develop personal career goals.

With guidance from an advisory committee made up of employers and working professionals, the photography program is constantly updated to reflect current industry standards.

AAS

First Quarter

PHOTO	101	Introduction to Photography	5
PHOTO	126	Digital Photography	5
		Communication Elective	5
		Total	**15**

Second Quarter

PHOTO	111	Studio Photography I	4
PHOTO	112	Photographic Design	4
PHOTO	115	Photography Lab II	3
		Human Relations/Leadership Elective	5
		Total	**16**

Third Quarter

ART	105	Color and Design	5
PHOTO	102	Photographic Appreciation	2
PHOTO	121	Location Photography I	4
PHOTO	125	Photography Lab III	3
PHOTO	133	Color Lab	3
		Total	**17**

Fourth Quarter

PHOTO	200	Photography Media	4
PHOTO	205	Professional Business Practices 1	3
PHOTO	232	Portraiture	4
PHOTO	233	Location Photography II	4
		Photography Approved Electives	3-4
		Total	**18–19**

Fifth Quarter

PHOTO	215	Portfolio Development I	3
PHOTO	227	Professional Business Practices II	3
PHOTO	231	Studio Photography II	4
		Computation Elective	5
		Photography Approved Electives	3-5
		Total	**18–20**

Sixth Quarter

PHOTO	225	Portfolio Development II	3
PHOTO	238	Fashion Photography	4
PHOTO	266	Cooperative Education Seminar	1
PHOTO	267	Cooperative Education Work Experience	2
		Photography Approved Electives	3-5
		Total	**13–15**

97-102 credits are required for the AAS

Communication Elective

BT	107	Business Communications	3
BT	108	Business Communications	3
ENGL&	101	English Composition I	5
ENGL	105	Pro/Tech: Basic Writing	5
JOURN	220	Introduction to News Writing	5

Computation Elective

ACCT	141	QuickBooks	5
BUS	123	Practical Business Math Applications	5
MATH&	107	Math in Society	5

Human Relations/Leadership Elective

BUS	280	Human Relations in Business	5
CMST&	101	Introduction to Communication	5
CMST&	210	Interpersonal Communication	5
CMST&	220	Public Speaking	5
HS	136	Improving Interpersonal Communication	5
MMGT	101	Principles of Management	5
PSYC&	100	General Psychology	5

Photography Approved Electives

ART	127	Visual Arts Special Workshops	1-15
ART	189	Printmaking	4
ART	191	Screen Printing	4
ART	192	Printmaking, Intaglio	4
GRDSN	129	Digital Studio	2
GRDSN	156	Illustrator I	2
GRDSN	158	PhotoShop I	2
GRDSN	162	MacIntosh OS X	2
GRDSN	163	InDesign I	2
GRDSN	164	Illustrator II	2
GRDSN	166	PhotoShop II	2
GRDSN	167	Fireworks	2
GRDSN	168	InDesign II	2
GRDSN	171	Flash	2
GRDSN	172	Dreamweaver	2
GRDSN	173	Flash II	2
GRDSN	174	Dreamweaver II	2
GRDSN	175	After Effects	2
GRDSN	176	Introduction to Page Design	2
GRDSN	200	Graphic Design Workshop	1-5
JOURN	101	College Newspaper Production I	3-5
JOURN	102	College Newspaper Production II	3-5
JOURN	103	College Newspaper Production III	3-5
JOURN	221	Digital News Production I	3
JOURN	222	Digital News Production II	3
JOURN	223	Digital News Production III	3
JOURN	225	Multimedia Journalism	5
PHOTO	120	Photographic Arts	3
PHOTO	131	Introduction to Photojournalism	3
PHOTO	132	Advanced Black and White Photography	3
PHOTO	235	Nature and Landscape Photography	5
PHOTO	236	Photography Workshop	1-4
PHOTO	237	Introduction to Documentary DV Production	5
PHOTO	240	Large Format Photography	4
PHOTO	247	HDSLR Filmmaking	5
PHOTO	267	Cooperative Education Work Experience	1-5

[1] If BT 107 is taken as the communication elective, student must take BT 108 for a total of 6 credits of communication elective.
[2] In addition to listed electives, student may select independent study with approval of program instructor.

PHYSICAL THERAPIST ASSISTANT
AAS: SFCC

SFCC offers a two–year program which includes study in anatomy and physiology, social science, technical physical therapy courses and practical clinical experience in area health care facilities affiliated with the college. The program is accredited by the Commission on Accreditation in Physical Therapy Education of the American Physical Therapy Association (APTA). The technical courses for the Physical Therapist Assistant (PTA) program are not designed to transfer to four–year schools.

Physical therapist assistants duties include: a) designing exercise programs and treatments that are within the plan of care proposed by the physical therapist b) training patients to use special equipment that will make life easier; c) applying equipment such as electrical stimulation and ultrasound which decrease pain and increase functions; and d) keeping records and reporting to the physical therapist on the patient's progress.

Physical therapist assistants work with all ages and are employed in a wide variety of settings, including hospitals, rehabilitation centers, pediatric facilities or school systems, private physical therapy clinics, home health care agencies, and extended care facilities. A national licensing examination is required for most states in order to practice as a physical therapist assistant.

Admission Requirements:

- Completion of the physical therapist assistant program application booklet which is available at the SFCC counseling center. Applications are accepted during the winter quarter preceding fall quarter entry into the program.
- Appropriate placement scores in assessment tests for ENGL& 101 and Math.
- Preferably a minimum of 2.0 in BIOL& 241
- Documentation of either paid or volunteer experience in a medical setting (preferably physical therapy).
- Current immunizations, drug screening and Washington State Patrol criminal background check.
- Essential requirements needed for the profession which include communication skills, cognitive demands, physical skills and behavioral, social and professional skills are discussed in greater detail in the **Program Information Booklet** located on our website.

The PTA program incorporates a selective process for admission. This process uses a point system based on coursework and experience as outlined in the application. Please be aware that the completion of all prerequisites does not ensure admission to the program.

AAS

Prerequisites:

– BIOL&	241	Human A & P 1 [1]	
ENGL&	101	English Composition I [2]	5
MATH	094	Algebra II [2]	5
PSYC&	100	General Psychology [2]	5
		Total	**15**

First Quarter

PTA	101	Introduction to Physical Therapy	3
PTA	102	Physical Therapy Terminology	1
PTA	106	Regional Human Anatomy and Physiology	5
PTA	110	PTA Procedures I: Basic PT Procedures	7
		Total	**16**

Second Quarter

PTA	103	Applied Anatomy	6
PTA	104	Survey of Pathophysiology	5
PTA	105	Introduction to Neuroscience	4
		Total	**15**

Third Quarter

PTA	111	PTA Procedures II: PT Modalities	7
PTA	112	PTA Procedures III: Functional Restoration	7
PTA	151	Clinical Experience I	2
		Total	**16**

Fourth Quarter

PTA	202	Introduction to Orthopedics	3
PTA	210	PTA Procedures IV: Therapeutic Exercise	7
PTA	212	PTA Procedures VI	4
PTA	251	Clinical Experience II	1
PTA	254	Clinical Seminar II	1
		Total	**16**

Fifth Quarter

PTA	201	Issues in Physical Therapy and Health Care	2
PTA	211	PTA Procedures V: Rehabilitation Applications	7
PTA	252	Clinical Experience III	3
PTA	255	Clinical Seminar III	1
		Total	**13**

Sixth Quarter

PTA	253	PTA Clinical Affiliation	12
		Total	**12**

103 credits are required for the AAS

[1] Must have been taken within the last five years and completed with a 2.0 grade or better. Coursework older than five years will be evaluated on a case–by–case basis. Even though BIOL& 160 is not a prerequisite for BIOL& 241 for PTA students, it is recommended. You must contact Loren Pemberton in the counseling center at (509) 533–3503 (Loren.Pemberton@spokanefalls.edu) in order to waive BIOL& 160 as a prerequisite for BIOL& 241.

[2] Admission preference is given to students who complete these courses prior to entry into the program. May be substituted with approval of program chair. Credits may be taken during summer between first and second year. Credits from these courses are included in the total credits for degree.

[3] MATH 092 or MATH 096 may be substituted for MATH 094. The COMPASS test must be taken to determine eligibility.

PHYSICS PRE-MAJOR
AA–DTA, AS–T 2: SCC/SFCC

Physics is the science dealing with the properties, changes and interactions of matter and energy. It is the study of basic natural laws.

Physicists work in research at many industrial centers; they are employed by government agencies at all levels. Educational institutions provide career opportunities for physics graduates. Students pursuing a major in physics will also study mathematics and other sciences such as chemistry, astronomy, etc.

The Associate in Physics (AA–DTA and AS–T #2) degree is an articulated transfer agreement for physics majors between community colleges and most four–year institutions within the state of Washington. Either degree shall only be granted to students who have earned a cumulative grade point average of 2.0 Students will enter the four–year institution at or near junior standing. Admission to Washington four–year institutions' schools is not guaranteed to students holding either degree. **It is highly recommended that students meet with a counselor or academic adviser** at Spokane Community College, Spokane Falls Community College or the Institute for Extended Learning on a regular basis to be sure that the requirements specified in this degree are met. Students should also seek academic advising at the four–year institution to which they plan to transfer early in their educational planning to learn about additional requirements and procedures for admission. To earn this degree, students must complete a minimum of 90 credits in academic courses numbered 100 or above and meet specific distribution requirements. **At least 5 credits must be W–designated (writing–intensive).**At least 30 credits must be earned from Spokane Community College or Spokane Falls Community College with at least 15 credits earned in residence at the college awarding the degree or certificate.

AA–DTA

	Suggested Courses to Consider [1]	90
	Total	**90**

90 credits are required for the AA–DTA

AS–T 2

	Suggested Courses to Consider [1]	90
	Total	**90**

90 credits are required for the AS–T 2

[1] Consult a counselor or academic adviser for recommended courses specific to student's choice of transfer institution.

POLITICAL SCIENCE PRE-MAJOR
AA–DTA: SCC/SFCC

Political Science is the social science concerned chiefly with the description and analysis of political systems, human behaviors, ideologies, governmental institutions, processes and decision–making procedures.

AA–DTA

	Suggested Courses to Consider [1]	90
	Total	**90**

90 credits are required for the AA–DTA

[1] Consult a counselor or academic adviser for recommended courses specific to student's choice of transfer institution.

PROJECT MANAGEMENT CERTIFICATE
Certificate: SCC

This certificate program will prepare students to understand the concepts and methods associated with project initiation, planning, execution, monitoring and controlling, and closing phases of project management. Students will utilize computer applications to manage and control project tasks, communication, costs, scheduling and quality. In addition, this program includes leadership and teambuilding development so vital for successful project management in the workplace. Students can expect to increase job skills for entry–level employment as well as career advancement. Courses in this program can be applied to the AAS degree in Management.

Certificate
First Quarter

CATT	241	Microsoft Project	2.5
CATT	242	Advanced Microsoft Project	2.5
MMGT	232	Project Leadership	5
MMGT	243	Fundamentals of Project Management	5
		Total	**15**

15 credits are required for the Certificate

PSYCHOLOGY PRE-MAJOR
AA–DTA: SCC/SFCC

Psychology, properly so called, is the study of behavior and mental processes of all organisms, not just humans. Students may pursue psychology as a profession or as an interest.

AA–DTA

	Suggested Courses to Consider [1]	90
	Total	**90**

90 credits are required for the AA–DTA

[1] Consult a counselor or academic adviser for recommended courses specific to student's choice of transfer institution.

RADIOLOGY TECHNOLOGY
AAS: SCC

Radiologic technologists are an integral part of a team of healthcare workers providing patient care. Their primary duties include producing radiographic examinations that aid the physicians in diagnosing diseases and/or injuries. The radiologic technologist performs examinations at the request of a physician.

The technologist's primary role is obtaining top quality radiographic images while providing patient care. Radiologic departments can be found in hospitals, freestanding clinics and physician offices. While in the program the students become proficient at performing examinations in general radiography, fluoroscopy, surgery, trauma and intensive care units.

The program meets the criteria set forth by the Joint Review Committee on Education in Radiologic Technology (JRCERT) in collaboration with academic guidelines set by the American Society of Radiologic Technologists (ASRT). Joint Review Committee on Education in Radiologic Technology, 20 N. Wacker Dr. Suite 2850, Chicago IL 60606–3182, Phone: (312) 704–5300 Fax: (312) 704–5304

Upon completion and graduation of the program the students are able to take the national registry examination given by the American Registry of Radiologic Technologists (ARRT).

Each required course for graduation must be completed with a grade of 2.0 or better before proceeding to the next quarter. All clinicals must be completed with a grade of 2.5 or better.

Washington State Patrol background checks and drug screening are completed at the beginning of the program and if there is a finding, clinical sites may not accept the student. This could prevent program completion, inability to take the national exam, and future employment due to a failed background check and/or drug screening.

Admission Requirements:

- Radiology courses are limited to students of the Radiology Technology program.
- A minimum score of 41 on the ASSET test is required in each session.
- Students applying to the course must have completed 80 hours as a volunteer or employee in a patient care setting, and 10 of these hours need to be completed in a radiology department.
- Interviews will be conducted as part of the selection process for the Radiology program.
- Students must provide three confidential letters of recommendation.
- Immunizations, and drug screening are required (after being accepted into the Radiology Technology program). Forms are available in the SCC registration office.
- All math and science prerequisites must have been completed within the last five years with a grade of 2.5 or better. All documentation must be submitted by June 25th of the year of application.

AAS

Prerequisites:

– BIOL&	241	Human A & P 1 [1]
– BIOL&	242	Human A & P 2 [1]
– CIS	110	Introduction to Computer Applications
– ENGL&	101	English Composition I [2]
– HED	125	Medical Terminology
– MATH	099	Intermediate Algebra [2]
– PHYS	100	Introductory Physics

First Quarter

RAD	111	Radiographic Positioning I	5
RAD	113	Patient Care and Ethics I	2
RAD	114	Radiographic Image Evaluation I	2
RAD	115	Fuch's Radiographic Principles I	3
RAD	116	Clinical Education I	8
		Total	**20**

Second Quarter

RAD	121	Radiographic Positioning II	3
RAD	123	Patient Care and Ethics II	2
RAD	124	Radiographic Image Evaluation II	2
RAD	125	Fuch's Radiographic Principles II	3
RAD	126	Clinical Education II	9
RAD	127	Mobile/Surgical Procedures	1
		Total	**20**

Third Quarter

RAD	131	Radiographic Positioning III	2
RAD	134	Radiographic Image Evaluation III	2
RAD	136	Clinical Education III	9
RAD	145	Fuch's Radiographic Principles III	2
		Total	**15**

Fourth Quarter

RAD	132	Radiation Physics	2
RAD	141	Radiographic Positioning IV	2
RAD	144	Radiographic Image Evaluation IV	1
RAD	146	Clinical Education IV	7
		Total	**12**

Fifth Quarter

RAD	212	Quality Management	1
RAD	213	Various Modalities	2
RAD	214	Radiographic Image Evaluation V	2
RAD	215	Radiation Biology and Protection	2
RAD	216	Clinical Education V	9
		Total	**16**

Sixth Quarter

RAD	211	Radiographic Positioning V	1
RAD	223	Radiation Pathology	2
RAD	224	Radiographic Image Evaluation VI	2
RAD	225	Skull and GI Review	1
RAD	226	Clinical Education VI	9
		Total	**15**

Seventh Quarter

RAD	235	Pharmacology/Venipuncture	1
RAD	236	Clinical Education VII	9
RAD	237	Review and Registration Preparation	3
RAD	238	Cat Scan	1
		Total	**14**

112 credits are required for the AAS

[1] This course has a prerequisite of BIOL& 160.
[2] This related education requirement may be met by any course or combination of courses approved by the instructional dean.

RESPIRATORY CARE
AAS: SCC

Respiratory Care is a dynamic, high tech, high touch field involving direct patient care. This field is a life supporting, life enhancing allied health care profession practiced under qualified medical direction. Services provided to patients with disorders of the cardiopulmonary system include diagnostic testing, therapeutics, monitoring and rehabilitation. Patient, family and public education are essential to the mission of the profession. Respiratory care services are provided in all health

care facilities (acute, subacute/long term, skilled nursing) and in the home.

This program is accredited by The Commission on Accreditation for Respiratory Care (www.coarc.com). Commission on Accreditation for Respiratory Care, 1248 Harwood Road Bedford, Texas 76021–4244 (817) 283–2835.

Upon completion of the program, the graduate qualifies for an associate in applied science degree and is eligible to apply to take the national entry–level (CRT certification) and advanced practitioner (RRT–Registered Respiratory Therapist) examinations offered by the National Board for Respiratory Care (NBRC). Additionally, graduates are qualified to sit for the NBRC specialty exams for pulmonary diagnostics and neonatal pediatric specialty.

Admission Requirements:

- High school diploma or GED certificate
- Interview with respiratory care instructor
- Appropriate scores in one of the following: ASSET or COMPASS
- Computer skills recommended
- Active e–mail account recommended
- American Heart Association: HCP CPR card (within six months) recommended
- All math and science courses must have been taken within the last five years and must have been completed with a 2.5 grade or better
- A GPA of 2.5 is necessary to enter the Respiratory Care program and a GPA of 2.0 must be maintained throughout the entire program.

AAS

Prerequisites:

– BIOL&	160	General Biology w/Lab	
– BIOL&	241	Human A & P 1	
– BIOL&	242	Human A & P 2	
– BIOL&	260	Microbiology	
– CHEM&	121	Intro to Chemistry: w/Lab	
– MATH	099	Intermediate Algebra	

First Quarter

ENGL&	101	English Composition I	5
NCT	113	Electrophysiology	4
RT	110	Physical Science for Respiratory Care	3
RT	111	Respiratory Care Fundamentals I	3
RT	112	Pharmacology and Medical Terminology I	1
		Total	**16**

Second Quarter

CMST&	210	Interpersonal Communication	5
NCT	123	History and Physical	3
RT	120	Respiratory Care Fundamentals II	4
		Total	**12**

Third Quarter

RT	130	Fundamentals of Spirometry and Blood Gas Analysis	3
RT	131	Cardiopulmonary Anatomy and Physiology	1
RT	132	Respiratory Care Fundamentals III	4
RT	133	Pharmacology and Medical Terminology II	3
RT	134	Respiratory Care Clinical I	1
		Total	**12**

Fourth Quarter

RT	140	Respiratory Care Fundamentals IV	2
RT	141	Medical/Surgical Respiratory Care	1
RT	142	Computer Applications for Respiratory Care	1
RT	143	Respiratory Care Clinical II	5
		Total	**9**

Fifth Quarter

RT	210	Critical Care I	6
RT	211	Advanced Cardiac Life Support	2
RT	212	Respiratory Care Clinical III	5
RT	213	Pulmonary Volumes, Diffusion and Instrumentation	3
RT	214	Pulmonary Diagnostics Clinical I	1
RT	215	Cardiopulmonary Pathophysiology	1
		Total	**18**

Sixth Quarter

RT	220	Critical Care II	5
RT	221	Perinatal Respiratory Care	3
RT	222	Respiratory Care Clinical IV	4
RT	223	Advanced Pulmonary Diagnostics	4
RT	224	Advanced Pulmonary Diagnostics Clinical II	1
		Total	**17**

Seventh Quarter

RT	230	Current Trends in Respiratory Care	2
RT	231	Patient Management and Problem Solving	3
RT	232	Sub-Acute/Rehabilitation Respiratory Care	2
RT	233	Fundamentals of Management in Health Care	2
RT	234	Respiratory Care Clinical V	5
		Total	**14**

98 credits are required for the AAS

RETAIL MANAGEMENT
Certificate: SFCC

The Retail Management Certificate prepares individuals to manage a variety of retail sales operations or lines of merchandise. Students who complete the ten course Retail Management Certificate program will develop a clear sense of the scope of a career in the field of retail management. The program serves both entry–level job candidates and incumbent employees. The curriculum includes foundational courses in both written and oral communication, business math, human relations, and microcomputer applications. Students also complete specific business and management courses in accounting, management, marketing, retailing, and human resource management. After successful completion of the required coursework, students will receive a Retail Management Certificate. This certificate is endorsed by the Western Association of Food Chains (WAFC).

Certificate

First Quarter

BT	107	Business Communications [1]	3
BUS	103	Basic Business Math and Electronic Calculators [2]	5
IS	120	Business Computer Use	3
MMGT	150	Principles of Retail Merchandising	5
		Total	**16**

Second Quarter

ACCT&	201	Prin of Accounting I	5
BT	108	Business Communications [1]	3
CMST&	101	Introduction to Communication	5
MMGT	231	Human Resource Management	5
		Total	**18**

Third Quarter

BUS	280	Human Relations in Business	5
MMGT	101	Principles of Management	5
MMGT	211	Marketing	5
		Total	**15**

49 credits are required for the Certificate

[1] May substitute ENGL& 101. If ENGL& 101 is substituted, an additional credit is required to achieve the total certificate credits of 49.
[2] May substitute MATH 090 or above.

RURAL AEROSPACE TRAINING
Certificate: SCC

The Institute for Extended Learning, in conjunction with Spokane Community College and the Inland Northwest Aerospace Technology Center, offers the Rural Aerospace certificate at the Colville IEL Industrial Center.

This program focuses on the knowledge, skills, and abilities needed to perform the typical duties of Precision Machining and Quality Assurance in the manufacturing industry. The program will prepare students to work with quality control systems management principles, applicable technical standards, testing inspection and reporting procedures; as well as preparing the student to work in small machine shops or manufacturing firms that produce durable goods such as metalworking and industrial machinery, aircraft parts, equipment, and components for manufactured products.

The Rural Aerospace Training Certificate, which consists of Precision Machining and Quality Assurance (one quarter each), prepares students for careers in the aerospace industry. A third quarter focus on welding and fabrication will provide skills needed for employment in rural communities. This certificate also provides the sustainability necessary for this program to continue in the rural counties.

Certificate
First Quarter

APLED	110	Applied Comprehensive Communication [1]	5
FLPT	104	Hydraulics/Pneumatic Fundamentals	6
MACH	106	Blueprint Reading	7
		Total	**18**

Second Quarter

APLED	125	Employment Preparation [1]	3
MACH	107	Precision Measurement and Tools	3
MACH	247	CNC Theory	5
MACH	248	CNC Lab	7
		Total	**18**

Third Quarter

AIRC	117	Theory of Heat Transfer	4
APLED	112	Applied Mathematics [1]	3
ELMT	102	Electrical Basics	6
WELD	104	Welding and Fabrication Basics	5
		Total	**18**

54 credits are required for the Certificate

[1] This related education requirement may be met by any course or combination of courses approved by the department dean.

SOCIAL MEDIA MARKETING
Certificate: SFCC

The primary goal of this certificate is to provide students with a working knowledge and hands on experience in the field of social media marketing. This certificate is designed for both incumbent workers who are looking to update their marketing, public relations, and advertising skills; and students seeking a position in the field of social media marketing.

Certificate
First Quarter

MMGT	125	Social Media Marketing	5
MMGT	126	Search Engine Marketing	5
		Total	**10**

Second Quarter

MMGT	128	Social Media Marketing Campaign	5
		Total	**5**

15 credits are required for the Certificate

SOCIAL SERVICES
AAS: SFCC

The Social Service program is designed for those who plan to seek employment in social services upon completion of the two–year program, or who wish to transfer to a four–year institution and complete a bachelor's degree.

The Social Service program leads to: an associate in applied science (AAS) degree that is for those who wish to transfer to a four–year college or seek employment in social services upon completion of the two–year program.

Those who have completed the AAS program will have acquired the necessary skills to work in various public and private social services programs. This degree also can serve as a transfer degree to four–year colleges. See program adviser for more information.

AAS
First Quarter

HS	102	Introduction to Human Services	5
HS	136	Improving Interpersonal Communication	5
HSSUB	131	Survey of Chemical Dependency	3
		Transfer Track Electives [1]	5
		Total	**18**

Second Quarter

HS	105	Child Abuse	5
HSGER	101	Introduction to Social Gerontology	5
HSGER	250	Death, Loss and Grief	5
		Total	**15**

Third Quarter

ENGL&	101	English Composition I	5
HS	115	Social Policy [2]	5
HSGER	115	Multi-Cultural Perspectives in Human Services [3]	5
		Total	**15**

Fourth Quarter

BUS	103	Basic Business Math and Electronic Calculators [4]	5
HS	281	Practicum I	5
		Transfer Track Electives [1]	5
		Total	**15**

Fifth Quarter

HS	282	Practicum II [5]	5
HSGER	210	Aging and Mental Health [6]	5
		Transfer Track Electives [1]	5
		Total	**15**

Sixth Quarter

HS	283	Practicum III [6]	5
		Transfer Track Electives [1]	10
		Total	**15**

93 credits are required for the AAS

[1] Select transfer track electives from AA degree requirements or human services courses approved by the program adviser.
[2] HS 115 may be substituted with HS 221 or HSSOC 115.
[3] HSGER 115 may be substituted with HSGER 201.
[4] BUS 103 may be substituted with any math course approved by the program adviser.

[5] HS 282 may be substituted with electives approved by the program adviser.
[6] May be substituted with human services electives.

SOCIOLOGY PRE-MAJOR
AA–DTA: SCC/SFCC

Sociology is defined as the study of the history, development, organization and problems of people living together as social groups. The sociologist strives to gain understanding of people through the scientific study of human relationships.

AA–DTA

	Suggested Courses to Consider [1]	90
	Total	**90**

90 credits are required for the AA–DTA

[1] Consult a counselor or academic adviser for recommended courses specific to student's choice of transfer institution.

SOFTWARE DEVELOPMENT
AAS, Certificate: SCC

The software development program trains students in current web and desktop application development using diverse industry technologies. Software development is an evolving field of study requiring continuing education and the ability to adapt to constant change. Graduates from this program acquire problem solving skills, are encouraged to work independently and as a team, and be ethical in all interactions.

Students must maintain a grade of 2.0 in each class.

AAS

First Quarter

CIS	111	XHTML Basics	5
CIS	146	Introduction to Programming/VB	5
ENGL&	101	English Composition I [1]	5
MATH&	107	Math in Society [1]	5
		Total	**20**

Second Quarter

CIS	112	Web Graphics with Photoshop	5
CIS	126	DBMS/SQL	5
CIS	130	Website Design	5
CIS	282	Programming I - Ruby	5
		Total	**20**

Third Quarter

CIS	114	JavaScript	5
CIS	154	Beginning Flash Development	5
CIS	256	C#	5
CIS	283	Programming II - Ruby	5
		Total	**20**

Fourth Quarter

CATT	241	Microsoft Project	2.5
CIS	149	Networking for Developers	5
CIS	284	Ruby on Rails	5
CMST&	210	Interpersonal Communication [1]	5
		Total	**17.5**

Fifth Quarter

CIS	230	PHP Programming	5
CIS	258	ASP.NET	5
CIS	272	Agile Software Development	5
		Total	**15**

Sixth Quarter

BT	160	Job Preparation Techniques [1]	3
CIS	239	Software Project Management	2.5
CIS	259	Advanced ASP.NET/AJAX	5
CIS	276	Software Development Capstone [2]	5
		Total	**15.5**

108 credits are required for the AAS

[1] This related education course may be substituted with any course or combination of courses approved by the instructional dean.
[2] Permission of instructor.

Certificate

Computer Science Certificate

CIS	146	Introduction to Programming/VB	5
CIS	282	Programming I - Ruby	5
CIS	283	Programming II - Ruby	5
		Total	**15**

15 credits are required for the Certificate

.Net Developer Certificate

CIS	126	DBMS/SQL	5
CIS	256	C#	5
CIS	258	ASP.NET	5
		Total	**15**

15 credits are required for the Certificate

Web Design Certificate

CIS	111	XHTML Basics	5
CIS	112	Web Graphics with Photoshop	5
CIS	130	Website Design	5
		Total	**15**

15 credits are required for the Certificate

Web Developer Certificate

CIS	114	JavaScript	5
CIS	258	ASP.NET	5
CIS	272	Agile Software Development	5
CIS	284	Ruby on Rails	5
		Total	**20**

20 credits are required for the Certificate

SURGICAL TECHNOLOGY
AAS: SCC

The Surgical Technology program prepares students to function in cooperation with the surgeon and nurses in the operating room performing duties that are vital for the safety and care of surgical patients. Students must have knowledge and skills in surgical aseptic techniques for preparation and use of materials during a surgical procedure. Students also must be able to relate to patients and other people in the field. Using reasonable judgment when working in emergency surgical situations is required.

At the completion of the program, students will be able to accept the responsibility expected of the surgical technologist as a beginning staff employee in the operating room. Prior to graduation, students will sit for the National Certifying Examination for Surgical Technologists for qualification as a certified surgical technologist (CST).

The Surgical Technology program is accredited by the Commission on Accreditation of Allied Health Education Programs (www.caahep.org) upon the recommendation of the National Board of Surgical Technology and Surgical Assisting (www.nbstsa.org). The National Board of Surgical Technology and Surgical Assisting (NBSTSA) 6 West Dry Creek Circle, Ste. 100 Littleton, CO 80120 Toll Free: 1–800–707–0057 FAX: 303–325–2536. Commission on Accreditation of Allied Health Education Programs (CAAHEP) 1361 Park Street Clearwater, Florida 33756 (707) 210–2350 www.caahep.org

Admission Requirements:

- High school diploma or GED certificate
- Appropriate scores in one of the following: ASSET or COMPASS
- Computer skills required
- Active e–mail account required
- Prerequisites: BIOL 160, MATH 092, CIS 110

Each required course for graduation must be completed with a grade of 2.0 or better before proceeding to the next quarter.

A student may repeat a surgical technology class only once, and it must be repeated within two years.

The Surgical Technology program must be completed within a three–year period.

The Surgical Technology program is a fall start program. Students are accepted from a wait list.

Students can enter into the third or fourth quarter only if they qualify for advanced standing and space is available. Students requesting placement into the program in the second year must pass a comprehensive test for each class or take SURG 202, 203 and 206 even if they had previously passed the courses.

AAS
Prerequisites:

– BIOL&	160	General Biology w/Lab	
– CIS	110	Introduction to Computer Applications	
– MATH	092	Elementary Algebra II [1]	

First Quarter

BIOL&	241	Human A & P 1	5
CMST&	210	Interpersonal Communication	5
HED	125	Medical Terminology	5
SURG	100	Introduction to Surgical Technology	2
SURG	105	Blood-borne Pathogens and HIV/AIDS	1
		Total	**18**

Second Quarter

BIOL&	242	Human A & P 2	5
ENGL&	101	English Composition I	5
SURG	107	Surgical Environment	3
SURG	120	Disease Transmission and Control	3
		Total	**16**

Third Quarter

HED	109	Human Physiology and Disease	5
PHARM	115	Mathematics for Pharmacy Technicians	5
SURG	101	Surgical Procedures	5
SURG	104	Central Service Clinical	1
SURG	111	Technical Skills I	4
		Total	**20**

Fourth Quarter

SURG	202	Surgical Procedures	6
SURG	212	Technical Skills II	4
SURG	254	Operating Room Practicum	2
		Total	**12**

Fifth Quarter

SURG	203	Surgical Procedures	4
SURG	206	Perioperative Care of the Patient	4
SURG	255	Operating Room Practicum	5
		Total	**13**

Sixth Quarter

SURG	250	Surgical Seminar	3
SURG	256	Operating Room Practicum	10
		Total	**13**

92 credits are required for the AAS

[1] MATH 092 may be substituted with MATH 096.

TELECOMMUNICATIONS OFFICER
Certificate: SCC

The Telecommunications Officer Certificate program consists of training suitable for students in Criminal Justice, Fire Science, and other departments involved in emergency calls for services. The program prepares students to receive, relay, and dispatch emergency calls; provide assistance to the public via telephone or in person; and operate a variety of communications equipment. The maintenance of accurate and precise recordkeeping is also stressed throughout the program.

In order to enter the program, students must prove keyboarding proficiency at 35 wpm and pass a multi–task evaluation test which will include testing the applicant's ability to manage stressful situations that may occur on–the–job. For further information, contact a program instructor or a counselor.

Certificate
First Quarter

CIS	110	Introduction to Computer Applications	5
CJ	209	Human Relations	3
CMST&	210	Interpersonal Communication	5
ENGL&	101	English Composition I	5
		Total	**18**

Second Quarter

CATT	122	Microsoft Access I	2.5
CATT	123	Microsoft Access II	2.5
CJ	150	Criminal Justice Report Writing	5
CJ	212	Professional Development	1
CJ	266	Cooperative Education Seminar [1]	1
CJ	267	Cooperative Education Work Experience [1]	6
		Total	**18**

36 credits are required for the Certificate

[1] CJ 266 and 267 may be substituted with CJ 288.

VASCULAR TECHNOLOGY
AAS: SCC

Vascular Technology is an Allied Health profession in which practitioners perform diagnostic and monitoring procedures using sound waves. The vascular sonographer performs examinations at the request or direction of a physician. Through subjective sampling and/or recording, the vascular sonographer proceeds with the examination to create an easily definable foundation of data from which a correct anatomic and physiologic diagnosis may be established for each patient.

The various types of ultrasound imaging equipment require a highly skilled sonographer to obtain the imaging information or other data required. The vascular sonographer must obtain appropriate history, physical findings, and pertinent laboratory data to adapt the imaging techniques to obtain comprehensive and diagnostic information.

The Vascular Technology program is accredited by the Commission on Accreditation of Allied Health Education Programs www.caahep) upon the recommendation of the Joint Review Committee for Cardiovascular Technology (www.jrccvt.org), JRC–CVT, 6 Pine Knoll Drive, Beverly, MA 01915–1425; (978) 456–5594.

Students within the Vascular Technology program are required to complete a six month, full–time clinical internship. As clinical space is limited in Spokane and the surrounding area, the student may be required to complete their internship in an out–of–town and/or out–of–area medical center.

Admission Recommendations/Requirements:

- Active email account recommended
- Computer skills recommended
- CHEM 120; CHEM& 121; HED 125; PHYS 100; PHYS 120 recommended
- Appropriate scores in ASSET or COMPASS required
- Immunizations, and drug screening and Washington State Patrol (WSP) background check are required after being accepted into the program.
- A 2.0 grade must be maintained quarterly in every course before proceeding to the next quarter.
- Students may repeat a professional course once, but it must be repeated within two years.
- High school diploma or GED certificate required
- Interview with vascular technology instructor required

Program Prerequisites:

- All math and science prerequisites must have been completed within the last five years with a grade of 2.0 or better.

AAS

Prerequisites:

– BIOL&	160	General Biology w/Lab	
– BIOL&	241	Human A & P 1	
– BIOL&	242	Human A & P 2	
– CMST	127	Leadership Development	
– ENGL&	101	English Composition I	
– MATH	099	Intermediate Algebra	

First Quarter

VASC	100	Introduction to Echo and Vascular	2
VASC	112	Vascular Fundamentals	4
VASC	113	Electrophysiology	4
VASC	116	Acute Coronary Syndrome	1
VASC	117	Cardiovascular Pharm 1	1
VASC	125	Ultrasound Physics and Instrumentation I	5
		Total	**17**

Second Quarter

VASC	122	Vascular Procedures I	4
VASC	123	Hemodynamics	2
VASC	124	Cardiovascular Pharm 2	1
VASC	126	Technical Skills/Reading Hemodynamics	1
VASC	127	Technical Skills/Pharmacology	1
VASC	133	ECHO Fundamentals	5
VASC	135	Ultrasound Physics and Instrumentation II	5
		Total	**19**

Third Quarter

VASC	131	Core Concepts in Vasc	2
VASC	132	Vascular Procedures II	6
VASC	134	Vascular Technical Skills I	2
VASC	136	Comparative Imaging Analysis	3
VASC	138	Cardiovascular Physiology	4
		Total	**17**

Fourth Quarter

VASC	139	Surgical Asepsis	1
VASC	140	Technical Skills/Surgical Asepsis	1
VASC	141	Data Collection and Presentation	3
VASC	142	Survey of Diagnostic Medical Sonography	3
VASC	143	Vascular Screening Simulation	4
VASC	144	Vascular Screening Seminar	2
		Total	**14**

Fifth Quarter

VASC	251	Vascular Technical Skills	4
VASC	252	Advanced Vascular Techniques	7
VASC	253	Vascular Clinical I	2
VASC	254	Vascular Clinical Preparation	2
VASC	255	Research Methods and Biostatistics	3
VASC	256	Cardiovascular Pathophysiology	1
		Total	**19**

Sixth Quarter

VASC	262	Vascular Clinical II	14
		Total	**14**

Seventh Quarter

VASC	272	Vascular Clinical III	14
		Total	**14**

114 credits are required for the AAS

VETERINARY MEDICINE PRE-MAJOR
AA–DTA, Associate in Biology DTA/MRP: SCC/SFCC

Humans use animals for food, work, and pleasure. The work of the veterinarian in preventing, curing, alleviating and eradicating disease is therefore very important to humans. Veterinary medicine offers many different career opportunities.

AA–DTA

		Suggested Courses to Consider [1]	90
		Total	**90**

90 credits are required for the AA–DTA

Associate in Biology DTA/MRP

		Suggested Courses to Consider [1]	90
		Total	**90**

90 credits are required for the Associate in Biology DTA/MRP

[1] Consult a counselor or academic adviser for recommended courses specific to student's choice of transfer institution.

WATER RESOURCES TECHNOLOGY
AAS: SCC

The Water Resources Technology program is designed to prepare students for positions in hydrology and water quality for local, state and federal agencies, and private industry.

The Water Resources Technology Water and Wastewater option is designed to prepare students for positions in public and private water and wastewater operations facilities.

AAS

Water Resources Technology

First Quarter

AGGEN	151	Shop Skills	4
NATRS	112	Natural Resources Mathematical Applications [1]	5
WATER	109	Introduction to Water Resources	5
WATER	120	Hydrologic Technical and Field Reports [1]	5
WATER	128	Occupational Preparation and Experience [1]	1
		Total	**20**

Second Quarter

NATRS	122	Natural Resources Trigonometric Applications [1]	5
NATRS	220	Introduction to Geographic Information Systems for Natural Resources [2]	4
WATER	129	Occupational Preparation and Experience	2
WATER	132	Hydrologic Field Projects [3]	2
WATER	208	Water Data and Records Analysis	5
		Total	**18**

Third Quarter

NATRS	204	Maps and Aerial Photo Interpretation	5
WATER	133	Hydrologic Field Projects [3]	2
WATER	205	Surveying [4]	5
WATER	210	Hydrologic Measurement	5
		Total	**17**

Fourth Quarter

NATRS	217	Freshwater Fisheries Biology	5
WATER	110	Hydrogeology	5
WATER	212	Water Rights and Laws	5
WATER	214	Advanced Hydrologic Records	5
WATER	228	Occupational Preparation and Experience	1
WATER	231	Hydrologic Field Projects [3]	2
		Total	**23**

Fifth Quarter

NATRS	230	Global Positioning Systems	3
WATER	111	Groundwater Systems	5
WATER	209	Water Quality	5
WATER	218	Hazardous Materials	3
WATER	229	Occupational Preparation and Experience	2
WATER	232	Hydrologic Field Projects [3]	1
		Total	**19**

Sixth Quarter

ENVS	211	Weather and Climate	5
NATRS	221	Applications in Geographic Information Systems	5
WATER	213	Advanced Water Quality	5
WATER	216	Watershed Restoration	5
WATER	233	Hydrologic Field Projects [3]	2
		Total	**22**

119 credits are required for the AAS

[1] These related education requirements may be met by any course or combination of courses approved by the instructional dean.
[2] Students must pass a competency test.
[3] Water 131 may be taken in the first quarter. Students are required to complete a minimum of five of the six field projects: WATER 131,132,133,231,232,233.
[4] May be substituted with NATRS 205.

Water and Wastewater
First Quarter

AGGEN	151	Shop Skills	4
NATRS	112	Natural Resources Mathematical Applications [1]	5
WATER	109	Introduction to Water Resources	5
WATER	120	Hydrologic Technical and Field Reports [1]	5
WATER	128	Occupational Preparation and Experience [1]	1
		Total	**20**

Second Quarter

NATRS	122	Natural Resources Trigonometric Applications [1]	5
NATRS	220	Introduction to Geographic Information Systems for Natural Resources [2]	4
WATER	129	Occupational Preparation and Experience	2
WATER	132	Hydrologic Field Projects [3]	2
WATER	208	Water Data and Records Analysis	5
		Total	**18**

Third Quarter

NATRS	204	Maps and Aerial Photo Interpretation	5
WATER	133	Hydrologic Field Projects [3]	2
WATER	135	Pumps, Pipes, Hydrants, and Valves	3
WATER	210	Hydrologic Measurement	5
		Total	**15**

Fourth Quarter

WATER	110	Hydrogeology	5
WATER	206	Basic Mechanical Maintenance and Repair	3
WATER	211	Water and Wastewater Regulations	3
WATER	212	Water Rights and Laws	5
WATER	228	Occupational Preparation and Experience	1
WATER	231	Hydrologic Field Projects	2
		Total	**19**

Fifth Quarter

NATRS	230	Global Positioning Systems	3
WATER	111	Groundwater Systems	5
WATER	209	Water Quality	5
WATER	218	Hazardous Materials	3
WATER	229	Occupational Preparation and Experience	2
WATER	232	Hydrologic Field Projects [3]	1
		Total	**19**

Sixth Quarter

ENVS	211	Weather and Climate	5
NATRS	221	Applications in Geographic Information Systems	5
WATER	213	Advanced Water Quality	5
WATER	215	Construction Inspection and Management	3
WATER	233	Hydrologic Field Projects [3]	2
		Total	**20**

111 credits are required for the AAS

[1] These related education requirements may be met by any course or combination of courses approved by the instructional dean.
[2] Students must pass a competency test.
[3] Water 131 may be taken in the first quarter. Students are required to complete a minimum of five of the six field projects: WATER 131,132,133,231,232,233.

WELDING AND FABRICATION
Certificate: SCC

Welding is one of the most common and dependable methods of joining materials together. Fabrication is the process of blueprint reading, layout, cutting and preparing materials for assembly.

The competency–based Welding and Fabrication program trains the student in the safe and correct procedures used in shielded metal–arc welding, oxy–acetylene welding, MIG and TIG welding, and air arc and plasma cutting. Course content also includes the safe use and care of hand and power equipment found in welding and fabrication shops. Some of the equipment includes overhead cranes, grinders, power saws, ironworker, cold saws and drill presses.

The student will be prepared for entry into many trade and industry opportunities, including construction, aerospace, automotive, heavy equipment, machinist, ship building and agriculture. This is only a small cross–section of job opportunities available to the student who successfully completes the program.

Certificate
First Quarter

APLED	121	Applied Written Communication [1]	4
WELD	113	Welding Math	2
WELD	114	Introduction to Blueprint Reading	3
WELD	115	Introduction to Fabrication	2
WELD	116	Shielded Metal Arc Welding Theory	3
WELD	117	Shielded Metal Arc Welding Applications	7
		Total	**21**

Second Quarter

APLED	125	Employment Preparation [1]	3
WELD	123	Intermediate Blueprint Reading	2
WELD	124	Advanced Shielded Metal Arc Welding Theory	2
WELD	125	Advanced Shielded Metal Arc Welding Applications	6
WELD	126	Intermediate Fabrication	5
		Total	**18**

Third Quarter

EMS	120	Basic First Aid in the Workplace	2
WELD	133	Advanced Blueprint Reading	2
WELD	134	Specialty Welding Theory	3
WELD	135	Specialty Welding Applications	8
WELD	136	Advanced Fabrication	2
		Total	**17**

56 credits are required for the Certificate

[1] This related education requirement may be met by any course or combination of courses approved by the instructional dean.

Course Descriptions

For detailed information on individual courses, view our course descriptions online at:
http://icatalog.ccs.spokane.edu/course/default.aspx

ACCOUNTING

ACCT 103 — Fundamental Bookkeeping Procedures (3 cr)
This course is an introduction to fundamental bookkeeping for a sole proprietorship. It focuses on learning how and when to record transactions and how and when to prepare financial statements. (SFCC)

ACCT 121 — Payroll Procedures (3 cr)
This course enables students to properly prepare, file and report quarterly payroll taxes; to prepare all necessary journal entries for payroll expenses; and to prepare all necessary end-of-year reports for payroll. Prerequisite: ACCT 103, 115 or permission of instructor. (SFCC)

ACCT 122 — Business Tax Accounting (1 cr)
This course enables students to understand and account for the additional taxes (other than income taxes) paid by business in Washington state, Spokane County and the City of Spokane. Prerequisite: ACCT 103 or permission of instructor. (IEL)

ACCT 141 — QuickBooks (1-5 cr)
This course offers a practical approach to computerized accounting using QuickBooks Pro. Students are exposed to basic setup and entry of daily accounting transactions and learn to manage revenue and expense accounts, payroll, inventory, bank reconciliation, and year-end procedures. This course does not fulfill the requirements for students majoring in accounting. Prerequisite: SCC: ACCT 151 or higher, or permission of instructor. (SCC, SFCC)

ACCT 142 — Advanced QuickBooks (1-5 cr)
This course offers a practical approach to computerized accounting using QuickBooks Pro. Students are exposed to advanced setup for service and merchandising companies. Processing quarterly payroll including, preparation of quarterly tax reports, tax transmittals and W2 forms are addressed. This course does not fulfill requirements for students majoring in accounting. Prerequisite: ACCT 141 or permission of instructor. (SCC, SFCC, IEL)

ACCT 151 — College Accounting I (5 cr)
Students learn the basic concepts of accounting for office, sales and small business personnel. The basic accounting cycle, use of general journals, worksheets, adjusting and closing entries, and complete financial statement preparation are emphasized. Payroll processing and employer payroll tax calculations, and reporting also are covered. These courses must be taken in sequence. These courses do not fulfill requirements for students majoring in accounting. (SCC, SFCC)

ACCT 152 — College Accounting II (5 cr)
Students learn the basic concepts of accounting for office, sales and small business personnel. The basic accounting cycle, use of general journals, worksheets, adjusting and closing entries, and complete financial statement preparation are emphasized. Payroll processing and employer payroll tax calculations, and reporting also are covered. These courses must be taken in sequence. These courses do not fulfill requirements for students majoring in accounting. (SCC, SFCC)

ACCT 161 — Payroll Procedures (4 cr)
This course enables students to properly prepare, file and report quarterly payroll taxes; prepare all necessary journal entries for payroll expenses; and prepare all essential end-of-the-year reports for payroll. Prerequisite: SCC: ACCT 151, ACCT& 201 or permission of instructor. SFCC: ACCT 103, 115 or permission of instructor and concurrent enrollment in ACCT 162. (SCC, SFCC)

ACCT 162 — Business Tax Accounting (1 cr)
This course enables students to understand and account for the additional taxes (other than income taxes) paid by businesses in Washington State, Spokane County and the City of Spokane. Prerequisite: SCC: ACCT 151, ACCT& 201 or permission of instructor. SFCC: ACCT 103 or permission of instructor and concurrent enrollment in ACCT 161. (SCC, SFCC)

ACCT& 201 — Prin of Accounting I (5 cr)
An introduction to the fundamentals of accounting, with application to sole proprietorship, partnership and corporate forms of business organization. Must be taken in sequence. (SCC, SFCC)

ACCT& 202 — Prin of Accounting II (5 cr)
An introduction to the fundamentals of accounting, with application to sole proprietorship, partnership and corporate forms of business organization. Must be taken in sequence. Prerequisite: A grade of 2.0 or better in ACCT& 201 or permission of instructor. (SCC, SFCC)

ACCT& 203 — Prin of Accounting III (5 cr)
Students learn presentation and interpretation of financial data for managerial use. Applications of accounting output to managerial control and planning are emphasized. Prerequisite: For SCC - ACCT& 201 or permission of instructor. For SFCC - ACCT& 202 or permission of instructor. (SCC, SFCC)

ACCT 204 — Accounting Integration (5 cr)
Students develop an understanding of the accounting information system, sales and acquisition cycles, internal controls, accounting fraud, accounting for not-for-profit organizations as well as federal taxation and tax return preparation. Prerequisite: ACCT& 201, ACCT 151 or permission of instructor. (SCC)

ACCT 212 — Accounting Applications and Analysis (5 cr)
Students learn a more in depth study of specific topics including accounting for property, plant and equipment (fixed assets), natural resources, intangible assets, accounting issues of partnerships, corporations, statements of cash flows, financial statement analysis and managerial accounting. Financial statement preparation and analysis are emphasized. This course does not fulfill requirements for accounting transfer students. Prerequisite: ACCT 152 or ACCT& 202. (SCC)

ACCT 218 — Accounting Analysis Simulation (1 cr)
Students participate in an accounting-oriented computerized business simulation. Grading option: Pass/fail. Prerequisite: Concurrent enrollment in ACCT 212 or permission of instructor. (SCC)

ACCT 219 — Payroll and Business Taxes (5 cr)
This course is designed to give students a thorough understanding of the most common taxes (other than income taxes) paid by businesses in the states of Idaho and Washington, Spokane County and the City of Spokane. Emphasis will be placed on manual and computerized payroll preparation, understanding the difference between an employee and an independent contractor, and determining when it's necessary to file 1099 forms and the Combined Excise Tax Return form. Current rates and forms will be used. (SFCC)

ACCT 267 — Cooperative Education Work Experience (1-18 cr)
For course description, see Cooperative Education. (SCC)

ACCT 288 — Cooperative Education Work Experience (No Seminar) (1-18 cr)
For course description, see Cooperative Education. (SCC)

AGRICULTURE, GENERAL

AGGEN 151 — Shop Skills (4 cr)
This course offers practical knowledge in a wide range of basic mechanical skills found in various agricultural industries. Safe use of hand and power tools, carpentry and woodworking, plumbing, electricity, concrete and masonry, and basic metalworking are emphasized. (SCC)

AGGEN 152 — Arc Welding (4 cr)
This course offers theory and practical applications using arc welding equipment to perform common maintenance and repairs that are encountered in agricultural occupations. Welding mild steel in flat, horizontal, vertical and overhead positions is emphasized. Students learn to select proper tools and equipment. Correct safety practices are stressed. (SCC)

AGGEN 153 — Oxy-acetylene Welding (4 cr)
This course offers theory and practical applications using oxy-acetylene welding equipment to perform common maintenance and repairs that are encountered in agricultural occupations. Students learn to select and use oxy-acetylene welding and cutting equipment. (SCC)

AGGEN 154 — Small Engine Operation and Maintenance (4 cr)
This course offers theory and practical applications of two- and four-cycle one-cylinder gas engines. The operation, care, maintenance and adjustment of engines common to agricultural applications are emphasized. (SCC)

AGGEN 156 — Equipment Operation and Maintenance (2-5 cr)
Safety, operation and preventive maintenance of engines and equipment used in agricultural occupations are emphasized. Theory and operation principles of two- and four-cycle diesel engines are included. (SCC)

AGGEN 157 — Arc Welding (1 cr)
Theory and practical applications in the selection and use of arc welding equipment are offered in the course. Performing basic maintenance, repair and construction in various mechanical fields are emphasized. (SCC)

AGGEN 158 — Oxy-acetylene Welding (1 cr)
Theory and practical applications using oxy-acetylene welding and cutting equipment to perform common maintenance, repair and construction jobs that are encountered in a variety of mechanical fields are introduced. (SCC)

AGGEN 161 — Advanced Maintenance Welding (1-4 cr)
This course introduces students to specific welding-related construction and repair jobs that are encountered in the industry. A menu concept is provided for individual programs to select the competencies required for their individual needs. The following competencies listed may include, but are not limited to, metal identification, specialized oxy-acetylene cutting, hard-facing, soldering and repairing metal parts utilizing a variety of welding processes. Prerequisite: AGGEN 152, 153 or permission of instructor. (SCC)

AGGEN 162 — Yard Art Welding (1 cr)
This course introduces the student to different forms of cutting and welding that can be used to create artistic forms. Students use new and discarded materials and cutting and welding forms which include, but are not limited to oxy/acetylene welding and cutting, MIG welding, brazing, soldering, and plasma cutting. (SCC)

AGRICULTURE/HORTICULTURE

AGHRT 101 — Basic Crop Science (5 cr)
This course introduces students to the basic principles of agronomy and the science which underlies those principles. Emphasis is placed on crop management practices such as tillage methods, variety selection, and monitoring of crop growth and development. Course objectives are based on the requirements of Certified Crop Advisor exam. (SCC)

AGHRT 102 — Pesticides and Fertilizer Application Equipment (2-4 cr)

This course emphasizes the practical application of pesticides and includes discussion and use sprayers and spreaders. Sprayer calibration is taught. Pesticide chemistry, selectivity and mode of action are introduced. Students prepare for the pesticide application exam. (SCC)

AGHRT 103 — Introduction to Greenhouse and Nursery Production (3 cr)
Students are introduced to greenhouse management and production. Variable physical conditions found in greenhouse environments and how they relate to plant growth and development are emphasized. Principles of greenhouse construction and operation also are covered. (SCC)

AGHRT 104 — Principles of Pest Management (5 cr)
Students are introduced to diseases, insects and weeds that pose problems to agricultural products in both the growth and storage stage. Options available to reduce or eliminate these problems for specific pest groups are discussed. Management, cultural practices, biological and natural controls, barriers, legislative controls and principles of chemical control are emphasized. (SCC)

AGHRT 105 — Horticultural Retail Sales (3 cr)
This course provides hands-on experience in the operation of the on-campus retail garden center, including operations, marketing and customer relations. (SCC)

AGHRT 106 — Greenhouse and Nursery Management I (5 cr)
This is the first in a series of three classes where students become engaged in the scheduling and production of flowering, tropical and bedding plants. Environmental factors affecting plant growth, manipulating the greenhouse environment, soil and water testing, fall propagation and nursery operations are emphasized. (SCC)

AGHRT 107 — Greenhouse and Nursery Management II (5 cr)
This class is the second in a series of three where students gain hands-on experience in scheduling and production of flowering, tropical and bedding plants. Greenhouse operations, site selection, greenhouse and nursery layout, heating and cooling, seed propagation, winter nursery operations, and bedding plant seed scheduling are emphasized. Prerequisite: AGHRT 106 or permission of instructor. (SCC)

AGHRT 108 — Greenhouse and Nursery Management III (4 cr)
This class is the third in a series of three where students become engaged in the scheduling and production of flowering, tropical and bedding plants. Plug production, production planning, determining cost and profit, pest and disease management, and spring nursery layout and operations are emphasized. Prerequisite: AGHRT 107 or permission of instructor. (SCC)

AGHRT 109 — Introduction to Vegetable Gardening (1-3 cr)
Students are introduced to vegetable gardening practices as they relate to our climate. Topics covered include season extenders, planning, soil preparation, planting time, acclimation, and sustainable gardening practices. (SCC)

AGHRT 110 — Fall Landscape Plant Materials (5 cr)
Students learn to identify fall landscape plants and their use in the Inland Northwest. Terminology of woody plant parts and plant nomenclature is emphasized. (SCC)

AGHRT 111 — House Plants (5 cr)
This course introduces students to plant material, cultural requirements and how to properly select plants found in floral shops, mass market outlets and interior plantscapes. Indoor environment also is studied. (SCC)

AGHRT 112 — Spring Landscape Plant Materials (5 cr)
Students learn to identify spring landscape plants and their use in the Inland Northwest. Conifers, broadleaf evergreens, and spring blooming trees and shrubs are emphasized. (SCC)

AGHRT 114 — Landscape Maintenance (3 cr)
This course covers major landscape maintenance practices including pruning, planting, fertilizer and pesticide application, landscape equipment operation, and maintenance of irrigation systems. Relevant business practices such as bidding and scheduling also are presented. (SCC)

AGHRT 115 — Pruning (2-3 cr)
This course introduces students to the art and science of pruning ornamental trees and shrubs using a combination of lectures and hands-on field experience. (SCC)

AGHRT 116 — Green Industry Business Management (5 cr)
This practical course introduces basic principles of management found in the agriculture/horticulture industry. Analyzing situations and establishing appropriate procedures are emphasized. Topics presented include types of ownership, basic financial management, personnel management and government agency functions. (SCC)

AGHRT 120 — Introduction to Animal Science (5 cr)
An introduction to animal science relating to beef, sheep and swine production with emphasis on livestock safety and the environment. Topics to be presented includes livestock breeds, reproduction, digestions, genetics, meats, marketing and breeding systems. (SCC)

AGHRT 124 — Agriculture Communication Skills (5 cr)
A practical course designed to give the student confidence through the development of human relations and communication skills, both verbal and written. Personal development is gained through an interaction between students and an understanding of course topics. Areas of emphasis includes developing a personal resume, writing letters of application and inquiry, and applying and interviewing for a job. Emphasis also is placed on developing a positive attitude, salesmanship and public relations skills. (SCC)

AGHRT 125 — Applied Agricultural Mathematics (5 cr)
Students are introduced to agriculturally oriented mathematical problems that are realistic, practical and thought-provoking. Agricultural production, management, marketing, horticulture and mechanization are emphasized. Students review basic mathematical concepts; calculations are accomplished with the aid of a calculator. (SCC)

AGHRT 126 — Computer Essentials for Environmental Sciences (2-5 cr)
This nonprogramming course introduces students to the use of computers as a tool for evaluating programs in agriculture, horticulture and related fields. Students are familiarized with key software through actual applications to problems in their chosen field of study. Windows, word processing, spreadsheets, databases, graphics and telecommunications are emphasized. (SCC)

AGHRT 171 — Agricultural Leadership Training (1 cr)
This course orients students with the agricultural program, the campus and community. Study skills are presented on topics such as study techniques, time management, communication and leadership styles. Leadership skills are encouraged through participation in a variety of department, club and civic activities. (SCC)

AGHRT 172 — Agricultural Leadership Training (1 cr)
This course orients students with the agricultural program, the campus and community. Study skills are presented on topics such as study techniques, time management, communication and leadership styles. Leadership skills are encouraged through participation in a variety of department, club and civic activities. (SCC)

AGHRT 173 — Agricultural Leadership Training (1 cr)
This course orients students with the agricultural program, the campus and community. Study skills are presented on topics such as study techniques, time management, communication and leadership styles. Leadership skills are encouraged through participation in a variety of department, club and civic activities. (SCC)

AGHRT 181 — Agricultural Leadership Training (1 cr)
This course orients students with the agricultural program, the campus and community. Study skills are presented on topics such as study techniques, time management, communication and leadership styles. Leadership skills are encouraged through participation in a variety of department, club and civic activities. (SCC)

AGHRT 182 — Agricultural Leadership Training (1 cr)
This course orients students with the agricultural program, the campus and community. Study skills are presented on topics such as study techniques, time management, communication and leadership styles. Leadership skills are encouraged through participation in a variety of department, club and civic activities. (SCC)

AGHRT 183 — Agricultural Leadership Training (1 cr)
This course orients students with the agricultural program, the campus and community. Study skills are presented on topics such as study techniques, time management, communication and leadership styles. Leadership skills are encouraged through participation in a variety of department, club and civic activities. (SCC)

AGHRT 195 — Practicum (2-3 cr)
This course offers practical lab experience involving typical problems that arise in the various agricultural/horticultural fields such as florist, greenhouse/nursery and landscape/turf. The areas of emphasis vary depending on the students' chosen program of study. (SCC)

AGHRT 201 — Landscape Installation (4-5 cr)
This course offers hands-on experience in installing landscapes using live projects on and off campus. Students develop competencies to become certified landscape technicians. Prerequisite: Concurrent enrollment in AGHRT 206. (SCC)

AGHRT 202 — Principles of Irrigation (4-5 cr)
This course introduces residential, commercial and agricultural irrigation principles. Sprinkler irrigation methods and designs, and performance characteristics of sprinkler irrigation equipment are emphasized. Prerequisite: AGHRT 125 or permission of instructor. (SCC)

AGHRT 203 — Agriculture/Horticulture Marketing (5 cr)
This course presents the marketing of agricultural and horticultural crops and products. Direct marketing and value added products are emphasized. Advertising methods, pricing and selling strategies, and the development of marketing plans and break-even charts are introduced. (SCC)

AGHRT 204 — Landscape Design 1 (4 cr)
This course introduces landscape design and graphical techniques used in the landscape design profession. Students use processes and principles to design landscapes. A history of landscape design and how it has influenced the styles of today is presented. Students learn to draw landscape components and complete landscape designs by hand. (SCC)

AGHRT 205 — Landscape Design 2 (4 cr)
This course introduces advanced landscape design principles. Students use processes and principles to design several partial and whole landscapes using hand-drawn designs as well as computer aided drafting (CAD software). Prerequisite: AGHRT 204. (SCC)

AGHRT 206 — Landscape Construction (4-5 cr)
Students are introduced to the principles and procedures of landscape construction. Estimation, bidding and site preparation, as well as the removal and installation of landscape features such as plant materials, irrigation systems and a variety of hard features. Prerequisite: AGGEN 151 or permission of instructor. (SCC)

AGHRT 210 — Indoor Plantscaping (3 cr)
A study of the plants used in the interior design of homes, offices and public buildings. Design principles, environmental and cultural needs of plants also are introduced. Course emphasis is on the professional maintenance of indoor plants. (SCC)

AGHRT 211 — Floral Design Techniques (5 cr)
This course introduces students to basic methods and principles of floral design with emphasis on the care and handling of flowers and plants, the use of color in floral arrangements, and the creation of a variety of floral arrangements. (SCC)

AGHRT 212 — Floral Design Applications (5 cr)
This course continues with the concepts introduced in AGHRT 211 emphasizing advanced floral arrangement methods. The study of historical periods of design and their application to contemporary floral design methods is presented. Prerequisite: AGHRT 211 or permission of instructor. (SCC)

AGHRT 213 — Retail Floristry (5 cr)
Students are introduced to the principles of successful florist management. Effective merchandising techniques and the creation of advanced floral arrangements are emphasized. Prerequisite: AGHRT 212 or permission of instructor. (SCC)

AGHRT 219 — Soil Management and Fertility (5 cr)
This course gives students a working knowledge of soil management. Students learn the role of each of the essential elements in plant growth and the deficiency symptoms of each. They also learn how the nutrients are stored in the soil and how they become available to plants. Numerous types of fertilizers and how each is used by plants are introduced. Various agricultural and horticultural soil management practices are discussed as well as how each affects the condition of the soil. (SCC)

AGHRT 222 — Livestock Management (5 cr)
An introduction to animal science relating to beef, sheep and swine production with emphasis on livestock safety and the environment. Topics to be presented includes livestock breeds, reproduction, digestion, genetics, meats, marketing and breeding systems. (SCC)

AGHRT 225 — Weed Biology and Control (5 cr)
This course introduces students to the basic principles and economic significance of weed biology, identification and control. Students learn to identify weeds in all stages of growth and the common characteristics of each of the weed families. The principles of weed control using herbicides are emphasized. A weed collection is required. Prerequisite: AGHRT 104 is recommended. (SCC)

AGHRT 226 — Turfgrass Management (5 cr)
This course introduces theory and practical application in landscape management techniques. Grass selection and establishment, soil management, fertilization, irrigation, mowing, pest management and other cultural practices required in the care of home lawns, parks and golf courses are emphasized. Prerequisite: AGHRT 104 or permission of instructor. (SCC)

AGHRT 228 — Arboriculture (5 cr)
This course presents the study of woody urban landscape plant forms including growth, selection, pruning, planting, maintenance and problem solving. (SCC)

AGHRT 229 — Arboriculture Climbing Techniques (3 cr)
This is a practical class to train students in safety, use of equipment and climbing techniques used in the arboriculture industry. Emphasis is on methods appropriate to the rope and saddle technique of tree access. (SCC)

AGHRT 230 — Plant Problem Diagnosis (5 cr)
Students study insects, diseases and environmental factors that adversely affect the health of agricultural and greenhouse crops and landscape plants. Problem diagnosis, identification of causal agent(s), and preparing recommendations for both chemical and cultural controls are emphasized. Prerequisite: AGHRT 104 or permission of instructor. (SCC)

AGHRT 232 — Pest Management Project (2 cr)
This is the capstone of the pest management series of courses. Students create a pest management plan for a crop or landscape including a variety of control measures for key pests. Students learn to select control measures based on a number of criteria. Prerequisite: AGHRT 104 is recommended and concurrent enrollment in AGHRT 230. (SCC)

AGHRT 234 — Bidding and Estimating (2-3 cr)
This course introduces the student to bidding and estimating practices for landscape design, construction, installation, and maintenance. Students learn to account for the numerous factors affecting the cost of these landscape practices. Contracts and risk management are also taught. (SCC)

AGHRT 240 — Practicum - Floral Design Projects 1 (3 cr)
This course provides practical lab experience involving advanced floral design techniques and floral shop management. Prerequisite: AGHRT 213. (SCC)

AGHRT 241 — Practicum - Floral Design Projects 2 (3 cr)
This course provides practical lab experience involving advanced floral design techniques and floral shop management. Prerequisite: AGHRT 213. (SCC)

AGHRT 266 — Cooperative Education Seminar (1-2 cr)
For course description, see Cooperative Education. (SCC)

AGHRT 267 — Cooperative Education Work Experience (1-18 cr)
For course description, see Cooperative Education. (SCC)

AGHRT 296 — Special Problems (1-3 cr)
This course is designed to meet specific skill levels for individual students. Course content varies depending on areas of special interest and the number of credits chosen. Established guidelines allow students to research special areas of interest. Prerequisite: Permission of instructor. (SCC)

AGHRT 297 — Special Problems (1-3 cr)
This course is designed to meet specific skill levels for individual students. Course content varies depending on areas of special interest and the number of credits chosen. Established guidelines allow students to research special areas of interest. Prerequisite: Permission of instructor. (SCC)

AMERICAN SIGN LANGUAGE

ASL& 121 — Am Sign Language I (5 cr)
First course in a series of three American Sign Language (ASL) courses that are prerequisites for the interpreter training program or can be taken for modern language credit. ASL I introduces at least 360 vocabulary words, receptive and expressive skills, deaf culture, and grammatical structure of ASL. (SCC, SFCC)

ASL& 122 — Am Sign Language II (5 cr)
Second course in a three-course series of American Sign Language (ASL). All are prerequisites to enter the interpreter training program or can be taken for modern language credit. This course l adds vocabulary development of at least 450 signs and their respective glosses, receptive and expressive skills, and enhance use and understanding of grammatical structure of ASL. Various aspects of deaf culture is discussed. Prerequisite: ASL& 121. (SCC, SFCC)

ASL& 123 — Am Sign Language III (5 cr)
This is the third course in a three- course series of American Sign Language (ASL). All are prerequisites to enter the interpreter training program or can be taken for modern language credit. This course increases vocabulary by introducing at least 350 new vocabulary words, advances receptive and expressive skills, enhances use of appropriate grammatical features of ASL and relate cultural aspects of the deaf community. Prerequisite: ASL& 121, 122. (SCC, SFCC)

ASL& 221 — American Sign Language IV (5 cr)
This is the fourth course in a series of 6 American Sign Language courses. This course emphasizes expressive and receptive communication skills involving elementary school coursework and accompanying vocabulary of at least 350 words; demand-control schema and aspects of ASL grammatical features. Information about Roles and Responsibilities of educational interpreters will be incorporated into each task. Prerequisite: ASL& 123 and concurrent enrollment in ITP 231, 241. (SFCC)

ASL& 222 — American Sign Language V (5 cr)
This is the fifth course in a series of 6 American Sign Language courses. This course incorporates expressive and receptive communication skills involving middle school subject matter and accompanying vocabulary of at least 400 words; additional information about demand-control schema and aspects of ASL grammatical features. Information about Deaf Culture will be compared to that of the majority hearing culture. Prerequisite: ASL& 221 and concurrent enrollment in ITP 232. (SFCC)

ASL& 223 — American Sign Language VI (5 cr)
This is the sixth course in a series of 6 American Sign Language courses. This course incorporates expressive and receptive communication skills involving high school subject matter and accompanying vocabulary of at least 350 words; comparative information about demand-control schema and aspects of ASL grammatical features. Information about Deaf Culture will be compared to that of the majority hearing culture. Prerequisite: ASL& 222 and concurrent enrollment in ITP 233, 243. (SFCC)

ANTHROPOLOGY

ANTH& 100 — Survey of Anthropology (5 cr)
Introduction to physical anthropology; the study of evolution, fossil forms and old world archeology. Prerequisite: SFCC required minimum reading placement score: COMPASS 80, ASSET 40. (SCC, SFCC)

ANTH& 206 — Cultural Anthropology (5 cr)
Introduces the student to the concept of culture and the studies of people of the world. This is an introduction to the theories that these studies are based upon and the development of an anthropological perspective of the world and its peoples. Prerequisite: SFCC recommended minimum reading placement score: COMPASS 80, ASSET 40. (SCC, SFCC)

ANTH& 210 — Indians of North America (5 cr)
A descriptive account of the American Indians, confined to the Indians north of Mexico from prehistoric to the reservation period. There is a concentration on the Indians of the Northwest and the Plains Indians, with an emphasis on their social, political and material culture. Prerequisite: SFCC recommended minimum reading placement score: COMPASS 80, ASSET 40. (SFCC)

ANTH 221 — Stone Age Survival (5 cr)
A general introduction to primitive technology. The student is given a chance to replicate tools. Explores kinship, ethnobotany and metaphysical positions that were held by prehistoric folks. Prerequisite: SFCC recommended minimum reading placement score: COMPASS 80, ASSET 40. (SFCC)

APPLIED EDUCATION

APLED 110 — Applied Comprehensive Communication (5 cr)
This course is an introduction to comprehensive communication skills and their application to vocational and academic studies. (SCC)

APLED 112 — Applied Mathematics (2-5 cr)
This course is an introduction to mathematical theory and its application to the professional/technical fields. Topics include an overview of general mathematical concepts, geometry, trigonometry and algebra, and how they are successfully utilized in practical situations. Prerequisite: Appropriate placement scores or permission of instructor. (SCC, IEL)

APLED 121 — Applied Written Communication (4 cr)
This course is an introduction to written communication skills and their application to vocational and academic studies. Development of writing skills necessary to plan and write technically formatted documents is emphasized. Prerequisite: Appropriate placement scores or permission of instructor. (SCC)

APLED 123 — Leadership Skills for Business and Industry (3-4 cr)
This course is an introduction to verbal communication and team-building skills necessary for success in business and industry. Methods of improving communication including nonverbal communication and conflict management are emphasized. Verbal presentation strategies are presented. Prerequisite: Appropriate placement scores or permission of instructor. (SCC)

APLED 125 — Employment Preparation (3 cr)
This course provides advanced communication concepts that focus on resume writing, job interviewing, team building, problem solving and presentational skills. Course content varies depending upon the needs of individual departments. Prerequisite: APLED 121 or ENGL& 101 and fifth or sixth quarter standing. Appropriate placement scores or permission of instructor. (SCC)

AQUATICS

AQUAT 101 — Beginning Swimming (1 cr)
This course introduces water safety techniques, development of confidence, floating and elementary strokes with special attention to form. Upon passage of skill levels, students are issued the appropriate Red Cross cards. (SCC)

AQUAT 110 — Intermediate Swimming (1 cr)
Students learn and perfect five basic strokes. Five advanced strokes are introduced, and basic rescue and water safety are emphasized. American Red Cross cards are awarded to those who successfully complete the course. Prerequisite: American Red Cross beginner's skills or permission of instructor. (SCC)

AQUAT 115 — Swimming (1 cr)
Students learn to improve skills at their own rate. Muscular and cardiorespiratory function through stroke development and general swimming activity are emphasized. (SCC)

AQUAT 132 — Springboard Diving - Beginning (1 cr)
This course introduces the skills and techniques of springboard diving. Approaches, take offs and entries for five basic dives are emphasized. (SCC)

AQUAT 136 — Aquatic Fitness (1 cr)
This progressive program of simple exercises in and out of the water develops general body conditioning and improves efficiency of the heart, lungs and circulation. Nonswimmers, as well as swimmers, benefit from this course. (SCC)

AQUAT 224 — Water Safety Instructor (2 cr)
This course covers swimming, life-saving skills and fundamentals necessary to achieve W.S.I. certification. Students prepare for employment as teachers or administrators of aquatic programs. Prerequisite: Current lifeguard training certification; 17 years of age. (SCC)

AQUAT 230 — Lifeguard Training (2 cr)
Proper guidelines for lifeguarding in pools are covered in this course. Standard first aid and CPR for the professional rescuer are included, as is American Red Cross certification. Prerequisite: Intermediate swimming level; 15 years of age. (SCC)

AQUAT 232 — Springboard Diving - Advanced (1 cr)
This course introduces the skills and techniques of springboard diving. Approaches, take offs and entries for five basic dives are emphasized. (SCC)

ARCHITECTURAL TECHNOLOGY

ARCHT 112 — Introduction to Architectural Drafting (7 cr)
This course includes instruction in the elements of floor plans and elevation development for inclusion in, and development of, a set of working drawings for a small residential project. Emphasis is placed on line construction, line quality and lettering. (SCC)

ARCHT 114 — Architectural Math (3 cr)
This course offers a review of basic math related to architectural drafting and math skills required for the construction industry. (SCC)

ARCHT 120 — Residential Architecture Theory (3 cr)
This course introduces students to the architectural drafting profession, including a historical review and basic principles of residential drafting. Career opportunities, comparisons with related professions, options regarding continuing education leading to a bachelor's degree and architectural licensing also are explored. (SCC)

ARCHT 122 — Basic Residential Drafting (5-7 cr)
Practical applications in the development of detailed architectural drawings for multilevel residences, quality lettering, line weight, drafting composition, drawing coordination and accuracy are emphasized. Preparation of a complete set of working drawings for each residence are included. Prerequisite: ARCHT 112 or permission of instructor. (SCC)

ARCHT 124 — Advanced Architectural Math (2 cr)
This course continues the principles introduced in ARCHT 114. Advanced math skills required for the construction industry are emphasized. Prerequisite: ARCHT 114 or permission of instructor. (SCC)

ARCHT 125 — Residential Building Codes (2 cr)
This course introduces uniform building codes as they apply to residential construction projects. An overview of general building codes is presented. (SCC)

ARCHT 126 — Introduction to Computer Aided Drafting (3-5 cr)
Students are introduced to the basic principles of CAD commands. Practical applications of a drawing software package and the creation of basic working drawings are emphasized. (SCC)

ARCHT 130 — Residential Building Materials (4 cr)
This is an introductory course to the materials commonly used in residential construction. A variety of building components, their applications and limitations, and basic construction methods will be emphasized. (SCC)

ARCHT 132 — Advanced Residential Drafting/CAD (7 cr)
This course provides students with practical applications utilizing all theory and training presented in previous quarters. Students develop complete sets of working drawings from plans of their choice and/or the construction program project house. Prerequisite: ARCHT 122 or permission of instructor. (SCC)

ARCHT 134 — Electrical and Mechanical Systems (3 cr)
This course introduces students to electrical and mechanical systems used on structures. Drafting techniques used to produce electrical and mechanical drawings are presented. Prerequisite: ARCHT 120 or permission of instructor. (SCC)

ARCHT 138 — CAD Applications (5 cr)
This course presents additional computer aided drafting (CAD) techniques. Specific details of stair, fireplace, window, cabinet and deck connections are emphasized. Prerequisite: ARCHT 122. (SCC)

ARCHT 139 — Delineation (4 cr)
This course explores numerous sketching techniques for plan and elevation development in addition to the fundamentals of perspective drawing to produce pictorial images for communication and design concepts. (SCC)

ARCHT 196 — Special Problems (4 cr)
This course offers an in-depth study of advanced topics relevant to the architectural technology field. Content includes basic and advanced blueprint reading, commercial building materials, sketching methods and techniques, site planning, and the uniform building code. Course content varies depending on program and student demand. (SCC)

ARCHT 240 — Commercial Building Codes (3 cr)
This course introduces code analysis and code conformance for nonresidential projects. Prerequisite: ARCHT 125 or permission of instructor. (SCC)

ARCHT 242 — Introduction to Commercial Drafting/CAD (8 cr)
Students receive practical lab experience in the development of a set of architectural working drawings from a preliminary design of a commercial building. Structural steel framing systems are emphasized with drawing on autocad software. Prerequisite: ARCHT 132 or permission of instructor. (SCC)

ARCHT 246 — Commercial Architecture Theory (3 cr)
Students are introduced to the commercial architectural drafting profession, including the processes and materials used in the construction of heavy timber, concrete and steel systems. Specific commercial drafting opportunities and procedures are emphasized. (SCC)

ARCHT 250 — Introduction to Commercial Building Materials (4 cr)
Students are introduced to the materials commonly used in commercial construction. A variety of building components, their applications and limitations, and basic construction methods are emphasized. (SCC)

ARCHT 251 — Advanced Commercial Building Codes (3 cr)
This course continues the concepts presented in ARCHT 240. Advanced code analysis and code conformance on commercial projects are emphasized. Prerequisite: ARCHT 240. (SCC)

ARCHT 252 — Basic Commercial Drafting/CAD (8 cr)
Practical lab experience is offered in this course in the development of a set of working drawings from a preliminary design of a nonresidential building utilizing structural concrete framing systems. Applications are drawn on the computer using Desktop Architectural software. Prerequisite: ARCHT 242 or permission of instructor. (SCC)

ARCHT 253 — Introduction to Architectural CAD (5 cr)
Students are introduced to the basic principles of CAD and its application to the architectural drafting field. Practical applications of a drawing software package and the creation of basic working drawings are emphasized. (SCC)

ARCHT 262 — Advanced Commercial Drafting/CAD (10 cr)
Practical lab experience is utilized in the development of a set of working drawings from a preliminary design of the student's choice. Final development is drawn on the computer using Architectural Desktop software. Prerequisite: ARCHT 252 or permission of instructor. (SCC)

ARCHT 263 — Advanced Commercial Building Materials (4 cr)
This course continues the concepts presented in ARCHT 250. A variety of building components, their applications and limitations, and basic construction methods are emphasized. Prerequisite: ARCHT 250. (SCC)

ARCHT 266 — Cooperative Education Seminar (1-2 cr)
For course description, see Cooperative Education. (SCC)

ARCHT 267 — Cooperative Education Work Experience (1-18 cr)
For course description, see Cooperative Education. (SCC)

ARCHT 288 — Cooperative Education Work Experience (No Seminar) (1-18 cr)
For course description, see Cooperative Education. (SCC)

ART

ART& 100 — Art Appreciation (5 cr)
A course to develop an appreciation and awareness of art, and to make art effective in daily living. Prerequisite: Recommend reading level: 80 COMPAS/40 ASSET. (SCC, SFCC)

ART 101 — Fundamentals of Drawing (4 cr)
Freehand drawing from observation is taught. Studies of form, texture, line, mass, shape and perspective applied to expressive drawing for the beginning student. (SFCC)

ART 102 — Drawing Composition (4 cr)
Includes studies of form, texture, line, mass and shape applied to expressive drawing with emphasis on good composition. (SFCC)

ART 103 — Drawing Techniques (4 cr)
Studies of form, texture, line, mass and shape are applied to expressive drawing with emphasis on a variety of drawing techniques. (SFCC)

ART 105 — Color and Design (5 cr)
A first-quarter studio class introducing the elements and principles of two-dimensional design. This course emphasizes the structures and theories of color as it is perceived via pigment and light. Through individual projects, exercises and discussion, the student learns basic art vocabulary, compositional structure, analytical skills and professional craftsmanship. (SFCC)

ART 106 — 3-D Design (4 cr)
A second-quarter design class continuing the development and exploration of the elements and principles of design with the emphasis on form and space. A variety of processes including modeling, carving, casting and fabrication are introduced through a series of exercises. Materials may include paper, wood, found objects, metals, clay, plaster and latex. Students learn safety procedures and the proper use of hand and power tools. Prerequisite: ART 105 or permission of instructor. (SFCC)

ART 108 — Ancient/Medieval Art (5 cr)
History of the development of major and minor arts from prehistoric times through the Middle Ages. The civilizations of the Near East, Egypt and the classical world are introduced through illustrated lecture and individual research. The developing art of Western Europe during the Middle Ages is seen in the context of its political, social, economic and religious environment. (SCC, SFCC)

ART 109 — Renaissance/Baroque Art (5 cr)
History of the development of major and minor arts from the Early Renaissance through the 18th century. Through illustrated lectures and individual research, the student will explore the work of individual artists, observe the changing role of the artist in his/her society, note the support systems of art patronage, and attempt to assess the aesthetics of the given period or style. (SCC, SFCC)

ART 110 — Modern Art (5 cr)
History of the development of modern art beginning with the 19th century and concluding with an emphasis on contemporary art and architecture. The course attempts to critically assess the aesthetics of art styles and ideologies. Through illustrated lectures and individual research the student are exposed to a variety of contemporary approaches and media in the visual arts. (SCC, SFCC)

ART 112 — Non-Western Art (5 cr)
This course is designed to explore the art from cultures outside the European tradition such as Asian, African, Meso American and groups from the North American continent. In addition to the basic slide/lecture format, there are guest speakers, films and videos, and one or two short art experiences. Prerequisite: Recommended reading level 80 compass/40 asset. (SCC, SFCC)

ART 122 — Health and Safety in Art (1 cr)
Designed to develop awareness of health, safety and toxicology concerns as they pertain to processes and materials used in the visual arts. Information on hazards and the necessary precautions for individual media, ventilation, substitutes for hazardous materials and safety in the studio is included. A recommended course for all art students. (SFCC)

ART 127 — Visual Arts Special Workshops (1-15 cr)
This course provides intensive studio experiences in specialized areas of visual arts including techniques or concepts not already covered by existing classes. May be repeated for a maximum of 15 credits. (SCC, SFCC)

ART 130 — Sculpture (4 cr)
Studio investigation of various sculptural concepts, materials and processes. Students work with equipment and tools and are given specific problems dealing with a variety of materials. Advanced students work closely and contractually with the instructor. Independent research and exploration is encouraged at beginning and advanced levels. May be repeated for a total of 16 credits. Prerequisite: ART 106 or 205 or an academic art course or permission of instructor. (SFCC)

ART 147 — Advanced Design (3 cr)
Advanced problems in aesthetic and symbolic considerations of 2-D and 3-D design. May be repeated for a total of 6 credits. Prerequisite: ART 105. (SFCC)

ART 161 — Portfolio I (1 cr)
A studio seminar to be taken at the end of the first year. An introduction to professional practices including preparation of a portfolio of original work, documentation of work using a copy stand and camera, and writing an artist's statement. Independent research, seminar discussions, guest artists, and viewing exhibitions and performances. Required for C.F.A. and A.F.A. candidates. To be taken spring quarter in the first year. Prerequisite: ART 106, 110 and 202, plus 10 additional Art credits at SFCC or permission of instructor. The above can be taken concurrently with ART 161. (SFCC)

ART 180 — Watercolor (4 cr)
Transparent and opaque watercolor, as well as other water mediums. Students learn to stretch paper and to handle the traditional tools and papers of this medium. Individual projects designed to encourage exploration and personal expression. May be repeated for a total of 16 credits. Prerequisite: ART 101 or 102 or 103 or 105. (SFCC)

ART 186 — Oil Painting (4 cr)
Working with oil medium on canvas, board or paper. Practice in stretching canvas, preparing the ground and mixing paint. Course emphasizes the formal aspects of composition and the development of an expressive approach to subjects and themes. May be repeated for a total of 16 credits. Prerequisite: ART 101 or 102 or 103 or 105. (SFCC)

ART 188 — Acrylic Painting (4 cr)
Working with acrylic and other compatible mediums on surfaces such as canvas, board or paper. Practice in stretching canvas, preparing the ground and mixing paint. Course emphasizes the formal aspects of composition and the development of an expressive approach to subjects and themes. On occasion, this course may be offered specifically to teach mural painting. May be repeated for a total of 16 credits. Prerequisite: ART 101 or 102 or 103 or 105. (SFCC)

ART 189 — Printmaking (4 cr)
A survey of the various printing processes, and an exploration into these to encourage the student to experiment and make comparisons as to the various qualities of each medium. Instructor may select from metal, stone, wood and linoleum, incorporating monotype, stenciling and stamping approaches in order to help students develop the knowledge of tools, materials and techniques. May be repeated for a total of 16 credits. Prerequisite: ART 101 or 102 or 103 or 105. (SFCC)

ART 190 — Printmaking Relief (4 cr)
Using surfaces such as wood and linoleum, the student explores direct and indirect methods of image formation. Stamping, frottage, embossing and traditional relief methods will be explored, as well as use of color on single and multiple plates. May be repeated for a total of 12 credits. Prerequisite: ART 101 or 102 or 103 or 105. (SFCC)

ART 191 — Screen Printing (4 cr)
Individual exploration of screen printing may include the photo process, tusche and glue, and cut stencil. The instructor considers both technical and aesthetic concerns. May be repeated for a total of 12 credits. Prerequisite: ART 101 or 102 or 103 or 105. (SFCC)

ART 192 — Printmaking, Intaglio (4 cr)
Dry point, engraving, etching, embossing and collography will be explored on surfaces such as zinc, copper, masonite and cardboard. Students may apply techniques such as soft ground, sugar lift, aquatint and color printing in conjunction with design concepts. May be repeated for a total of 12 credits. Prerequisite: ART 101 or 102 or 103 or 105. (SFCC)

ART 194 — Jewelry (3 cr)
Design and construction of jewelry in various materials including contemporary materials with emphasis on design and craftsmanship. Course applies to the artist as a craftsperson in the professional field. May be repeated for a total of 9 credits. Prerequisite: ART 101 or 102 or 103 or 105. (SFCC)

ART 197 — Art Mediums and Techniques (3 cr)
Introduction to various craft techniques. May include papermaking, mixed media, simple book designing, weaving, ceramic arts, enameling and printing techniques. Application of the elements and principles of design. Good craftsmanship is stressed. May be repeated for a total of 9 credits. (SFCC)

ART 201 — Experimental Drawing (3 cr)
Studio and outside assignments are designed to expand the student's understanding of drawing concepts. Student is expected to participate in individual and group assignments that challenge the traditional definitions of drawing. Emphasis is on a creative approach to traditional and unconventional materials. Prerequisite: ART 101 or 102 or 103 or 202 or permission of instructor. (SFCC)

ART 202 — Figure Drawing (3 cr)
Working from a live model, the student explores a range of drawing approaches including gestural drawings, sustained renderings, structural drawings and expressive treatment of the figure. Exercises are performed which emphasize anatomical structure and focus on fragments, such as hand studies and portraiture. The development of a personal approach to drawing the figure and an examination of how the figure can be handled in art is explored through such means as critiques, slide presentations and demonstrations. May be repeated for a total of 18 credits. Prerequisite: ART 101 or 102 or 103 or permission of instructor. (SFCC)

ART 205 — Ceramics (4 cr)
Clay forming processes, hand-building, potter's wheel and principles of glazing and firing. May be repeated for a total of 12 credits. (SFCC)

ART 206 — Advanced Ceramics (4 cr)
This course involves advanced work in ceramics including specialized glaze and firing techniques, sculpture and functional form, student-based research project, and development of individual artistic concepts in clay. May be repeated for a total of 12 credits. Prerequisite: Three quarters of ART 205 or permission of instructor. (SFCC)

ART 261 — Exhibit (1 cr)
Planning and installation of a culminating exhibition. Seminar dealing with professional practices: slide documentation, presentation and exhibitions, resumes and statements, and public relations. Critiques and articulation of personal work. Independent research, seminar discussions, gallery visits and guest artists. Required for all C.F.A. and A.F.A. candidates for graduation. To be taken spring quarter in the second year. Prerequisite: ART 161 plus 25 credits in art at SFCC or permission of instructor. (SFCC)

ART 266 — Cooperative Education Seminar (1-2 cr)
For course description, see Cooperative Education. (SCC)

ART 267 — Cooperative Education Work Experience (1-18 cr)
For course description, see Cooperative Education. (SCC)

ASTRONOMY

ASTR& 100 — Survey of Astronomy (5 cr)
This course provides a survey of astronomy that includes its history as a science, the motions of celestial objects, the solar system, the life cycles of stars, the Milky Way and other galaxies, and cosmology. This is a non-lab physical science course, and credit will not be granted for both ASTR& 100 and ASTR& 101. (SCC, SFCC)

ASTR& 101 — Intro to Astronomy (5 cr)
This course provides an introduction to general astronomy topics such as patterns of motion in the sky, the physics of motion and light, the formation and characteristics of the solar system, stars and stellar evolution, galaxies, and cosmology. Weekly laboratory required. Credit will not be granted for both ASTR& 101 and ASTR& 100. (SCC, SFCC)

AUDIO ENGINEERING

AUDIO 101 — Audio Fundamentals for Multimedia (4 cr)
This course introduces digital audio recording and editing for multimedia productions. Students will learn how to produce audio for podcasts and video productions. Course content includes: microphone technology, field recording, synchronization, sound design and editing. (SFCC)

AUDIO 113 — Live Sound and Location Recording I (3 cr)
This course instructs students in the design and use of live sound reinforcement systems and principles of live concert recording. Students receive hands-on training in cabling, acoustics, equalization, critical listening, and mixing, as well as techniques for successful location recording. Prerequisite: AUDIO 117, 155 and concurrent enrollment in AUDIO 120. (SFCC)

AUDIO 116 — Music Basics for Audio Professionals (5 cr)
Students learn basic music theory, vocabulary, instrumental concepts and communication skills needed to succeed in the professional recording industry. Basic keyboard skills are developed as preparation for MIDI sequencing. Prerequisite: Concurrent enrollment in AUDIO 155. (SFCC)

AUDIO 117 — Introduction to Music Technology (5 cr)
Students learn the history of electronic music, and the development of analog/digital synthesis and sampling technology. MIDI concepts and applications are covered. Students receive hands-on experience programming and editing sounds on analog synthesizers and digital samplers. Basic PC computer music sequencing is introduced. (SFCC)

AUDIO 120 — Digital Audio I (4 cr)
This course is an introduction to digital audio workstations, including: basic audio recording, editing and mixing functions, MIDI sequencing and arranging, digital audio theory, file management, and basic operating system skills. Prerequisite: AUDIO 116, 117, 155, MUSC& 141 and concurrent enrollment in AUDIO 156. (SFCC)

AUDIO 121 — Digital Audio II (4 cr)
This course is a continuation of Digital Audio I and provides intermediate level Digital Audio Workstation instruction. Students further explore the recording, editing, and mixing capabilities of DAW software. Prerequisite: AUDIO 120, 156. (SFCC)

AUDIO 151 — Audio Project I (1 cr)
Students plan and implement complete recording studio projects including set up, recording, overdubbing, mixdown and mastering. Prerequisite: AUDIO 155 and concurrent enrollment in AUDIO 156. (SFCC)

AUDIO 155 — Introduction to Recording (5 cr)
This course is an introduction to techniques and equipment for audio recording. Students study acoustics, studio construction, microphones, signal flow, multitrack recording, signal processing and receive hands-on recording experience. Prerequisite: Concurrent enrollment in AUDIO 117. (SFCC)

AUDIO 156 — Audio Engineering I (4 cr)
Students study multitrack recording and mixdown techniques including signal flow, microphone techniques, reverb, delay, effects, signal processing and basic mastering. Critical listening and aural skills are developed and applied in mixdowns and Audio Project classes. Prerequisite: AUDIO 155 and concurrent enrollment in AUDIO 151. (SFCC)

AUDIO 159 — Business of Music (5 cr)
With emphasis on human relations and personal communication skills, students are guided through the maze of the music industry. Skills are developed for working with agents, managers, attorneys, recording company executives, ad agencies, promoters, club owners and musicians. Various music and studio career opportunities are explored along with the pros and cons of contracts, unions, guilds, copyright, publishing and performing rights organizations. (SFCC)

AUDIO 205 — MIDI Arranging (5 cr)
Students compose and arrange music for small groups of instruments as used in live performance, commercial radio and TV jingles. Using Finale notation software and MIDI production software for the Mac workstation, students study composition and style techniques. Prerequisite: AUDIO 218, MUSC 214 and concurrent enrollment in AUDIO 213 and 219 or 255. (SFCC)

AUDIO 206 — Scoring for Film and Multi-Media (5 cr)
This advanced course provides students with a comprehensive foundation of music scoring and sound design structures for film and video. Students use Mac computer workstations and music production software. Open to full time students in the Audio Technology program. Prerequisite: AUDIO 205 and concurrent enrollment in AUDIO 220. (SFCC)

AUDIO 213 — Live Sound II (4 cr)
This course is a continuation of AUDIO 113 with emphasis on setup and operation of larger systems. Students study system design, signal processing, acoustics, troubleshooting, critical listening and effective communication. Students receive extensive hands-on experience running sound for a variety of music ensembles. Prerequisite: AUDIO 113, 156 and concurrent enrollment in AUDIO 217, 218, MUSC 214. (SFCC)

AUDIO 217 — System Setup and Maintenance (3 cr)
Students learn to set up and solve technical problems within a digital audio/MIDI workstation. Learn about MIDI/Audio interface connections and troubleshooting in both digital and combination digital /analog recording studio environments. Prerequisite: MUSC 167 and concurrent enrollment in AUDIO 218 and 213 or 255, MUSC 214. (SFCC)

AUDIO 218 — Digital Audio III (5 cr)
This course provides intermediate level instruction on Pro Tools digital audio workstations with an emphasis on music editing and professional mixing techniques. Prerequisite: AUDIO 121, 156 and MUSC 167. (SFCC)

AUDIO 219 — Digital Audio IV (5 cr)
This course provides advanced level instruction on Pro Tools digital audio workstations with an emphasis on MIDI and music production. Prerequisite: AUDIO 218 and 213 or 255 and concurrent enrollment in AUDIO 205, 213 or 255. (SFCC)

AUDIO 220 — Digital Audio V (5 cr)
This course will provide an overview of the sound for picture industry as well as in-depth instruction on sound effects creation/ editing, ADR, field recording, synch, and post-production utilizing Pro Tools digital audio workstations. Prerequisite: AUDIO 213, 218 or 255 and concurrent enrollment in AUDIO 205, 213 or 255. (SFCC)

AUDIO 251 — Audio Projects II (1 cr)
Students record, edit, and mix audio projects for their portfolios in this course. Students begin pre-production and then projects are assessed at several points during the recording process. Finished mixes are critiqued and then mastered. Prerequisite: AUDIO 151, 255, 219 and concurrent enrollment in AUDIO 260. (SFCC)

AUDIO 255 — Audio Engineering II (4 cr)
Students study more advanced audio recording and production techniques as they participate in live recording and mixdown sessions. This includes further study of analog and digital signal processing multitrack editing and CD production. Prerequisite: AUDIO 121, 151, 156 and concurrent enrollment in AUDIO 217, 218, MUSC 214. (SFCC)

AUDIO 260 — Audio Portfolio (1 cr)
In this course students assemble a professional audio portfolio for presentation to prospective employers. Students learn advanced signal processing techniques and develop refined critical listening skills. Prerequisite: AUDIO 151, 255, 219 and concurrent enrollment in AUDIO 206, 220, 251. (SFCC)

AUDIO 266 — Cooperative Education Seminar (1 cr)
For course description, see Cooperative Education. (SFCC)

AUDIO 267 — Cooperative Education Work Experience (1-3 cr)
For course description, see Cooperative Education. (SFCC)

AUTOMOTIVE COLLISION AND REFINISHING TECHNICIAN

ABF 113 — Introduction to Job Safety, Tools, and Equipment (4 cr)
Students are introduced to personal safety and health protection requirements found in typical body shops. General shop procedures and operations are emphasized. Prerequisite: Concurrent enrollment in ABF 114, 115, 116. (SCC)

ABF 114 — Introduction to Unibody and Frame Alignment and Repair (4 cr)
Applications of basic auto sheet metal work, body shop power tools and welding equipment are introduced. Safety procedures and minor auto body repairs are emphasized. Prerequisite: Concurrent enrollment in ABF 113, 115, 116. (SCC)

ABF 115 — Basic Metal Straightening and Panel Alignment (4 cr)
Auto plastics and other body shop repairs are introduced. Major collision diagnosis, body alignment techniques and corrosion protection are emphasized. Prerequisite: Concurrent enrollment in ABF 113, 114, 116. (SCC)

ABF 116 — Introduction to Estimating and Parts Identification (4 cr)
Students learn to estimate major collision damage, auto body repair and finishing costs. Classifying body damage and parts identification are included. Prerequisite: Concurrent enrollment in ABF 113, 114, 115. (SCC)

ABF 117 — Automotive Collision MIG Welding (1 cr)
This course introduces students to the basic MIG skills required for success in the automotive collision and refinishing field. A variety of basic welding skills are introduced with emphasis on welding safety. (SCC)

ABF 123 — Introduction to Major Panel Replacement (5 cr)
Students learn the basic theory of major panel replacement. Alignment, replacement procedures and the use of plastics are emphasized. Prerequisite: Concurrent enrollment in ABF 124, 125, 126. (SCC)

ABF 124 — Introduction to Mechanical Components (3 cr)
Students are introduced to automobile body construction types and their common mechanical components. Areas of emphasis include energy absorbers, suspension and steering systems, and CV joints. Prerequisite: Concurrent enrollment in ABF 123, 125, 126. (SCC)

ABF 125 — Introduction to Major Unibody and Frame Repair (5 cr)
Students learn the basic theory and application of major unibody and frame repairs. Metalworking, glass replacement, fiberglass repair and universal measuring systems are emphasized. Prerequisite: Concurrent enrollment in ABF 123, 124, 126. (SCC)

ABF 126 — Fundamentals of Shop Procedures (3 cr)
Students learn practical applications found in typical body shops. Hydraulic equipment, corrosion proofing, welding and cost estimating are emphasized. Prerequisite: Concurrent enrollment in ABF 123, 124, 125. (SCC)

ABF 133 — Introduction to Industrial Safety and Hygiene (3 cr)
Students learn basic theory and techniques of industrial safety and hygiene. Personal safety and health practices, and safe operating procedures for shop equipment are emphasized. Prerequisite: Concurrent enrollment in ABF 134, 135, 136, 137. (SCC)

ABF 134 — Introduction to Interior and Exterior Surface Preparation (4 cr)
Basic principles of interior and exterior surface preparation are introduced. Students analyze the components of primers, undercoats and topcoats. (SCC)

ABF 135 — Basic Polishing and Detailing (3 cr)
Students are introduced to polishing and detailing procedures. Washing, compounding and polishing, and interior and exterior detailing are emphasized. Prerequisite: Concurrent enrollment in ABF 133, 134, 136, 137. (SCC)

ABF 136 — Introduction to Topcoat Systems and Application Procedures (3 cr)
Students are introduced to the basic principles of topcoat application with emphasis on the types of automotive topcoat systems and their application procedures. The development of skillful spraying techniques is introduced. Prerequisite: Concurrent enrollment in ABF 133, 134, 135, 137. (SCC)

ABF 137 — Basic Color Matching and Paint Mixing Fundamentals (3 cr)
Students are introduced to the basic principles of color matching and paint mixing. Students practice color analysis and tinting. Prerequisite: Concurrent enrollment in ABF 133, 134, 135, 136. (SCC)

ABF 243 — Advanced Unibody and Frame Alignment and Repair (6 cr)
Students learn a variety of advanced applications of auto sheet metal work, body shop power tools and welding equipment techniques. Prerequisite: Concurrent enrollment in ABF 244, 245. (SCC)

ABF 244 — Advanced Metal Straightening and Panel Alignment Methods (5 cr)
Students practice advanced methods of metal straightening and panel alignment. Prerequisite: Concurrent enrollment in ABF 243, 245. (SCC)

ABF 245 — Estimating Applications (5 cr)
Students focus on advanced estimating procedures and techniques for a variety of auto repairs. Prerequisite: Concurrent enrollment in ABF 243, 244. (SCC)

ABF 253 — Intermediate Major Panel Replacement Applications (6 cr)
This course continues with the concepts introduced in ABF 123 with emphasis on plastic welding, patching and rust repair. Prerequisite: Concurrent enrollment in ABF 254, 255. (SCC)

ABF 254 — Intermediate Mechanical Components Applications (4 cr)
This course continues with the concepts introduced in ABF 124. Students practice diagnostic and repair techniques for energy absorbers, steering and cooling systems. Prerequisite: Concurrent enrollment in ABF 253, 255. (SCC)

ABF 255 — Intermediate Major Unibody and Frame Methods (6 cr)
This course continues with the theory and application of major unibody and frame repair. Hydraulic equipment, various welding techniques and repair of miscellaneous automobile components are emphasized. Prerequisite: Concurrent enrollment in ABF 253, 254. (SCC)

ABF 263 — Advanced Interior and Exterior Surface Preparation (4 cr)
This course offers practical applications of interior and exterior surface preparation. Surface defects, sanding techniques and primers are emphasized. Prerequisite: ABF 134, 135, 136, 137. (SCC)

ABF 264 — Advanced Paint Application, Color Matching, and Paint Mixing (4 cr)
This course offers applications of detailing and polishing techniques. Carpet and engine cleaning are emphasized. Prerequisite: Concurrent enrollment in ABF 263, 265, 268. (SCC)

ABF 265 — Materials and Cost Estimation (3 cr)
This course continues with the concepts introduced in ABF 245. Part prices, labor costs and refinishing time calculations are emphasized. Prerequisite: Concurrent enrollment in ABF 263, 264, 268. (SCC)

ABF 266 — Cooperative Education Seminar (1-2 cr)
For course description, see Cooperative Education. (SCC)

ABF 267 — Cooperative Education Work Experience (1-18 cr)
For course description, see Cooperative Education. (SCC)

ABF 268 — Advanced Finessing, Compounding, and Detailing (5 cr)
This course emphasizes practical applications of color matching, paint mixing and tinting procedures. Prerequisite: ABF 134, 135, 136, 137. (SCC)

ABF 288 — Cooperative Education Work Experience (No Seminar) (1-18 cr)
For course description, see Cooperative Education. (SCC)

AUTOMOTIVE TECHNOLOGY

AUTO 101 — Electrical Circuitry Theory (5 cr)
The student will learn basic essential electronic concepts; circuits; batteries; starting systems and charging systems. Prerequisite: AUTO 102. (SCC)

AUTO 102 — Electrical Circuitry Applications (3 cr)
This course introduces students to Toyota T-TEN coursework. A brief overview of tire service, tools and equipment, lube service, Toyota information systems and the Toyota Dealership is presented. Prerequisite: Concurrent enrollment in AUTO 103. (SCC)

AUTO 103 — Electrical Wiring Diagrams (5 cr)
This course introduces students to the basic Toyota automotive tool system and testing equipment. Prerequisite: Concurrent enrollment in AUTO 102. (SCC)

AUTO 104 — Advanced Diagnosis of Electronics (4 cr)
This course introduces students to the first portion of the Technician Portfolio and the on-the-job portion of this course. Prerequisite: Dealership qualifications apply and concurrent enrollment in AUTO 105. (SCC)

AUTO 105 — Toyota Electrical Systems I (3 cr)
This course introduces the student to the Toyota Electrical System and its electrical components. Prerequisite: Concurrent enrollment in AUTO 104. (SCC)

AUTO 106 — Toyota Internship (1 cr)
This course continues the dealership training and TPORT work done as on-the-job training. Prerequisite: Concurrent enrollment in AUTO 105. (SCC)

AUTO 107 — Toyota Electrical Circuitry Theories (5 cr)
The student will learn basic essential electronic concepts; circuits; batteries; starting systems and charging systems. Prerequisite: Concurrent enrollment in AUTO 106. (SCC)

AUTO 108 — Engine Theory (6 cr)
The student will learn the basic techniques of diagnosis of automotive electronic control engines. (SCC)

AUTO 109 — Engine Repair Applications (2 cr)
This basic course includes component ideas, troubleshooting and diagnosing. (SCC)

AUTO 110 — Introduction to Toyota (1 cr)
This course introduces students to Toyota T-TEN coursework. A brief overview of tire service, tools and equipment, lube service, Toyota information systems and the Toyota Dealership is presented. (SCC)

AUTO 111 — Theory of Brakes (3 cr)
This course is an introduction to the theory and operation of automotive brake systems, hydraulic systems and all types of brake systems. Prerequisite: Concurrent enrollment in AUTO 112. (SCC)

AUTO 112 — Theory and Application of Brake Repair (4 cr)
This course provides practical shop experience in the application of the principles taught in AUTO 111. Areas of emphasis are hydraulic systems and brake systems. Prerequisite: Concurrent enrollment in AUTO 111. (SCC)

AUTO 113 — Theory of Transmissions/Transaxles (3 cr)
This course provides an introduction to the theory and operation of automotive manual transmissions and transaxles, differential, drive line, and constant velocity joints. Prerequisite: Concurrent enrollment in AUTO 114. (SCC)

AUTO 114 — Diagnosis of Transmissions/Transaxles (4 cr)
This course provides practical shop experience and application of transmissions and transaxles. Prerequisite: Concurrent enrollment in AUTO 113. (SCC)

AUTO 115 — Theory of Electronics and Accessories (4 cr)
This course introduces students to the theory of basic electrical concepts including Ohm's Law, magnetism, analog and digital meters, and test equipment. Electronics and electrical components also are introduced. Prerequisite: Concurrent enrollment in AUTO 116. (SCC)

AUTO 116 — Diagnosis of Electronics and Accessories (5 cr)
Practical shop experience in the testing of electrical circuits is offered in this course. Related test equipment such as test lamps, voltmeters, ammeters and ohmmeters is used to diagnose electrical problems. Prerequisite: Concurrent enrollment in AUTO 115. (SCC)

AUTO 117 — Theory of Engine Performance (5 cr)
This course introduces students to the diagnosis and repair of automotive engines. Areas of emphasis includes ignition, fuel, exhaust and emissions control. Prerequisite: Concurrent enrollment in AUTO 118. (SCC)

AUTO 118 — Diagnosis of Engine Performance (6 cr)
Students are introduced to practical shop experience in the diagnosis and repair of automotive engines. Ignition, fuel, exhaust and emissions control are emphasized. Prerequisite: Concurrent enrollment in AUTO 117. (SCC)

AUTO 119 — Theory of Air Conditioning (2 cr)
This course introduces students to the theory of automotive heating and air conditioning systems. (SCC)

AUTO 120 — Air Conditioning Applications (3 cr)
This course provides students with practical shop experience in the diagnosis and repair of heating and air conditioning systems. Prerequisite: Concurrent enrollment in AUTO 119. (SCC)

AUTO 121 — Principles of Engine Performance, Air Conditioning, and Electrical (4 cr)
Students learn advanced concepts introduced in AUTO 215 and 217. Theory and principles of computerized engine controls, automotive exhaust emissions, fuel injection and ignition systems are emphasized. Prerequisite: AUTO 215, 216, 217, 218 and concurrent enrollment in AUTO 122. (SCC)

AUTO 122 — Engine Performance, Service, and Repair (5 cr)
Students learn advanced concepts introduced in AUTO 216 and 218. Theory and principles of computerized engine controls, automotive exhaust emissions, fuel injection and ignition systems are emphasized. Prerequisite: AUTO 215, 216, 217, 218 and concurrent enrollment in AUTO 121. (SCC)

AUTO 123 — Toyota Engine Performance I (4 cr)
The student will learn the Basic techniques of diagnosis of automotive electronic control engines. (SCC)

AUTO 124 — Toyota Engine Performance I Lab (4 cr)
This basic course includes component idea, troubleshooting and diagnosing. Prerequisite: Concurrent enrollment in AUTO 123. (SCC)

AUTO 125 — Toyota Engine Repair (4 cr)
This course enables the student to understand engine operation, cleaning and safety operations. It includes the US and Metric system and troubleshooting and diagnosing. Prerequisite: Concurrent enrollment in AUTO 126. (SCC)

AUTO 126 — Toyota Engine Repair Lab (5 cr)
This course enables the student to remove, reinstall, teardown, overhaul, diagnosis of engine operation, service and repair. Prerequisite: Concurrent enrollment in AUTO 125. (SCC)

AUTO 127 — Toyota Electrical Systems II (1 cr)
This advanced course continues studies of the Toyota Electrical System, computer controlled circuits, wiring diagram reading, and its electrical components. Prerequisite: Concurrent enrollment in AUTO 126. (SCC)

AUTO 128 — Toyota Electrical Systems II Lab (1 cr)
This advanced course focuses on the electronic concepts, circuits, Troubleshootings, wiring diagram reading, and electronic computer systems. Prerequisite: Concurrent enrollment in AUTO 127. (SCC)

AUTO 129 — Principles of Automatic Transmissions (4 cr)
Principles of steering systems, including four-wheel alignment, late model transmissions, transaxles and sub-assemblies are emphasized. Prerequisite: Concurrent enrollment in AUTO 130. (SCC)

AUTO 130 — Service and Repair of Automatic Transmissions (5 cr)
This course emphasizes application of principles presented in AUTO 129. Content areas include all types of steering systems, including four-wheel alignments; late model transmissions, transaxles and sub-assemblies. Prerequisite: Concurrent enrollment in AUTO 129. (SCC)

AUTO 131 — Principles of Suspension Systems (4 cr)
This course introduces students to the basic principles of steering and suspension systems including MacPherson struts and four-wheel alignment. Prerequisite: Concurrent enrollment in AUTO 132. (SCC)

AUTO 132 — Service and Repair of Suspension Systems (5 cr)
This course introduces students to the practical applications of steering and suspension systems including MacPherson struts and four-wheel alignment. Prerequisite: Concurrent enrollment in AUTO 131. (SCC)

AUTO 133 — Toyota Applications of Steering and Suspension Systems (4 cr)
This course includes instruction on the service and repair of all types of steering and suspension systems. (SCC)

AUTO 134 — Heating and Air Conditioning Lecture (5 cr)
Advanced knowledge of the refrigeration process, AC systems, ATC systems diagnosing and repairing all systems are explored in this course. (SCC)

AUTO 135 — Heating and Air Conditioning Application (4 cr)
This course includes in-depth advanced knowledge of the repair and service of the refrigeration process, AC Systems, ATC systems diagnosis and repair of all systems explored in this course. (SCC)

AUTO 136 — Toyota Theory of Brakes (5 cr)
This course is an introduction to the theory and operation of automotive brake systems, hydraulic systems and all types of brake systems. Prerequisite: Concurrent enrollment in AUTO 137. (SCC)

AUTO 137 — Toyota Brake Applications (4 cr)
This course provides practical shop experience in the application of the principles taught in AUTO 111. Areas of emphasis are hydraulic systems and brake systems. Prerequisite: Concurrent enrollment in AUTO 136. (SCC)

AUTO 138 — Manual Transmissions Lecture (4 cr)
This course provides an introduction to the theory and operation of automotive manual transmissions and transaxles, differentials, drive lines and constant velocity joints. Prerequisite: Concurrent enrollment in AUTO 139. (SCC)

AUTO 139 — Toyota Manual Transmission Application (3 cr)
This course provides practical shop experience and application of transmissions and transaxles. Prerequisite: Concurrent enrollment in AUTO 138. (SCC)

AUTO 140 — Automatic Transmissions Lecture (4 cr)
Principles of steering systems, including four-wheel alignment, late model transmissions, transaxles, and sub-assemblies are emphasized. Prerequisite: Concurrent enrollment in AUTO 141. (SCC)

AUTO 141 — Toyota Automatic Transmission Applications (5 cr)
This course emphasizes application of principles presented in AUTO 129. Content areas include all types of steering systems, including four-wheel alignments; late model transmissions, transaxles and sub-assemblies. Prerequisite: Concurrent enrollment in AUTO 140. (SCC)

AUTO 142 — Principles of Steering and Suspension Systems (4 cr)
This course introduces students to the practical applications of steering and suspension systems including MacPherson struts and four-wheel alignment. (SCC)

AUTO 201 — Toyota Brakes (3 cr)
Students learn to identify, describe the purpose, types of applications, and operation methods pertaining to automobile brake systems. Prerequisite: Concurrent enrollment in AUTO 128. (SCC)

AUTO 202 — Toyota Brakes Lab (3 cr)
This course introduces students to Toyota T-TEN coursework. A brief overview of tire service, tools and measurements, lube service, Toyota information systems, and electrical theory and circuitry is presented. Prerequisite: Concurrent enrollment in AUTO 201. (SCC)

AUTO 203 — Toyota Steering and Suspension (3 cr)
This course includes instruction on the service and repair of all types of steering and suspension systems. Prerequisite: Concurrent enrollment in AUTO 202. (SCC)

AUTO 204 — Toyota Steering and Suspension Lab (3 cr)
This course includes instruction on the service and repair of all types of Steering and Suspension systems. Prerequisite: Concurrent enrollment in AUTO 203. (SCC)

AUTO 205 — Toyota Internship (5 cr)
This course continues the work involving TPORT with the Toyota dealer and the student technician. Prerequisite: Concurrent enrollment in AUTO 204. (SCC)

AUTO 206 — Theory of Engine Performance (3 cr)
The student will learn to identify the components of the standard Toyota engine. The function of the engine and its components and operation will also be explored. (SCC)

AUTO 207 — Toyota Engine Performance II (2 cr)
This course includes instruction on identifying the components of the standard Toyota engine. It explains the function of engine components and includes advanced shop application. Prerequisite: Concurrent enrollment in AUTO 205. (SCC)

AUTO 208 — Toyota Engine Performance II Lab (3 cr)
This course includes instruction on identifying, servicing and repairing the Toyota engine performance concerns. Prerequisite: Concurrent enrollment in AUTO 207. (SCC)

AUTO 209 — Toyota Internship (12 cr)
This continues the internship with the dealership using TPORT. Prerequisite: Concurrent enrollment in AUTO 208. (SCC)

AUTO 211 — Theory of Engines (7 cr)
This course is an introduction to the theory and operation of fundamentals of engine diagnosis, cylinder heads, valve trains, engine blocks, lubrication and cooling systems. Prerequisite: AUTO 111 and concurrent enrollment in AUTO 212. (SCC)

AUTO 212 — Theory and Application of Engine Repair (9 cr)
This course provides practical shop experience in engine repair including engine diagnosis, cylinder head inspection, valve trains, engine blocks, lubrication and cooling fundamentals. Prerequisite: AUTO 112 and concurrent enrollment in AUTO 211. (SCC)

AUTO 215 — Advanced Theory of Electronics and Accessories (3 cr)
Students learn the practical application of Ohm's Law, analog and digital meters, and test equipment. Hookup and testing of electronics and electrical components are presented. Prerequisite: AUTO 115, 116 and concurrent enrollment in AUTO 216. (SCC)

AUTO 216 — Advanced Diagnosis of Electronics and Accessories (4 cr)
Students obtain practical shop experience in the repair and replacement of electrical circuits. Related test equipment such as test lamps, voltmeters, ammeters, lab scopes and ohmmeters is used to diagnose electrical problems. Prerequisite: AUTO 115, 116 and concurrent enrollment in AUTO 215. (SCC)

AUTO 217 — Principles of Automatic Transmissions (4 cr)
Students will learn about the principles of Automatic Transmissions system. Diagnosing problems and repair methods will be explored. Prerequisite: Concurrent enrollment in AUTO 209. (SCC)

AUTO 218 — Service and Repair of Automatic Transmissions (5 cr)
Students will become familiar with the service and repair of transmissions and transaxles, differential, drive line, and constant velocity joints. Prerequisite: Concurrent enrollment in AUTO 217. (SCC)

AUTO 219 — Toyota Hybrid Service and Repair (3 cr)
Students explore the purpose, types of applications, and operation methods pertaining to hybrid service and repair. (SCC)

AUTO 220 — Toyota Engine Performance II (3 cr)
This course includes instruction on identifying the components of the standard Toyota engine. It explains the function of engine components and includes advanced shop application. (SCC)

AUTO 221 — Advanced Principles of Engine Performance, Air Conditioning, and Electrical (3 cr)
Students are offered advanced shop experience introduced in AUTO 121. The application of principles of computerized engine controls, automotive exhaust emissions, fuel injection and ignition systems is emphasized. Prerequisite: AUTO 121 and concurrent enrollment in AUTO 222. (SCC)

AUTO 222 — Advanced Engine Performance, Service, and Repair (4 cr)
Students learn advanced concepts introduced in AUTO 122 with shop experience in special problems of principles of computerized engine controls, automotive exhaust emissions, fuel injection and ignition systems. Prerequisite: AUTO 121, 122 and concurrent enrollment in AUTO 221. (SCC)

AUTO 223 — Toyota Engine Performance II Lab (5 cr)
This course includes advanced knowledge of the purpose, types of applications, and operation methods pertaining to all types of transmissions and transaxles, and suspension systems. (SCC)

AUTO 224 — Diagnosis of Transmissions (4 cr)
This advanced course includes further knowledge about the purpose, types of application, and operation methods pertaining to all types of transmissions and transaxles and suspension systems. Prerequisite: Concurrent enrollment in AUTO 223. (SCC)

AUTO 225 — Toyota Heating and Air Conditioning (2 cr)
Advanced knowledge of the refrigeration process, AC systems, ATC systems diagnosing and repairing all systems are explored in this course. Prerequisite: Concurrent enrollment in AUTO 224. (SCC)

AUTO 226 — Hybrid Safety Service and Repair (4 cr)
This course includes in-depth knowledge of advanced knowledge of the repair and service of the refrigeration process, AC systems, ATC systems diagnosis and repair of all systems explored in this course. (SCC)

AUTO 227 — Theory of Hybrids (5 cr)
This course introduces students to the diagnosis and repair of electric vehicles. Areas of emphasis include alternative fuels, hybrid vehicles, batteries, and safety precautions. Prerequisite: AUTO 111, 112, 113, 114, 115, 116, 117-120, 129, 130, 131, 132, 215, 216 or ASE Certifications and concurrent enrollment in AUTO 228. (SCC)

AUTO 228 — Diagnosis of Hybrids (6 cr)
Students are introduced to practical shop experience in the diagnosis and repair of hybrid vehicles. Regenerative brake systems, hybrid vehicle transmissions and transaxles, and various manufacturers' vehicle type controls are emphasized. Prerequisite: AUTO 227 or permission of instructor and concurrent enrollment in AUTO 227. (SCC)

AUTO 229 — Alternative Fuels (3 cr)
This course introduces students to the theory of alternative fuel systems and fuel cells. Prerequisite: AUTO 227 or permission of instructor. (SCC)

AUTO 230 — Safety Procedures for Hybrids (2 cr)
This course provides students with theory and practical shop experience in the safety procedures used when working on hybrid vehicles. Prerequisite: AUTO 227 or permission of instructor and concurrent enrollment in AUTO 229. (SCC)

AUTO 235 — Engine Performance - Toyota T-TEN (16 cr)
Information in this course includes an introduction to electrical circuit diagnosis with emphasis on electrical terminology, circuit concepts, and diagnostic techniques used to repair starting and charging systems. Course content is limited to the Toyota T-TEN (Technical Educational Network) instructional program. (SCC)

AUTO 236 — Toyota Internship (7 cr)
This is the final internship the student will have with the dealer to complete the Toyota T-TEN program. Prerequisite: Concurrent enrollment in AUTO 226. (SCC)

AUTO 240 — Heating and Air Conditioning - Toyota T-TEN (16 cr)
Information in this course includes an introduction to the diagnosis and repair of air conditioning and automatic temperature control systems. Course content is limited to the Toyota T-TEN (Technical Education Network) instructional program. (SCC)

AUTO 241 — Manual/Automatic Transmissions - Toyota T-TEN (16 cr)
Information presented in this course includes the study of both automatic and manual transmissions in front and rear wheel drive vehicles. Practical applications include the diagnosis and repair of the transmission system including clutches, transmissions, transaxles and transfer cases. Course content is limited to the Toyota T-TEN (Technical Education Network) instructional program. (SCC)

AUTO 250 — Automotive Service Writer (16 cr)
Theory and practical shop experience is the responsibility of the service writer employed in an automotive dealership or an independent service center. Sales and service techniques and the daily operational procedures practiced in automotive service centers is emphasized. Prerequisite: Permission of instructor. (SCC)

AUTO 252 — Engines - Toyota T-TEN (16 cr)
This course introduces the theory and operation of engine fundamentals including cylinder heads, valve trains, engine blocks, and lubrication and cooling systems. Practical applications include the removal, disassembly and inspection of the car engine. Course content is limited to the Toyota T-TEN (Technical Education Network) instructional program. (SCC)

AUTO 262 — Suspension, Brakes and ABS - Toyota T-TEN (16 cr)
This course introduces students to the theory and operation of all types of brake systems, suspension systems including MacPherson struts, short- and long-arm systems, and rear suspension systems. Course content is limited to the Toyota T-TEN (Technical Education Network) instructional program. (SCC)

AUTO 266 — Cooperative Education Seminar (1-2 cr)
For course description, see Cooperative Education. (SCC)

AUTO 267 — Cooperative Education Work Experience (1-18 cr)
For course description, see Cooperative Education. (SCC)

AUTO 270 — High Performance Engines (16 cr)
This course is designed for students interested in expanding their knowledge after completion of their A.A.S. degree in Automotive Technology. Special needs and skills required to work on high performance engines are emphasized. Prerequisite: A.A.S. degree in Automotive Technology or ASE Masters degree. (SCC)

AUTO 288 — Cooperative Education Work Experience (No Seminar) (1-18 cr)
For course description, see Cooperative Education. (SCC)

AVIATION MAINTENANCE TECHNOLOGY

ARCFT 115 — Introduction to General Aircraft Maintenance (1-5 cr)
This course introduces students to the basic concepts of airframe and powerplant mechanics including the use of tools and equipment, basic mechanics techniques, materials, and processes. FAA regulations, weight and balance control, basic electrical systems and instrumentation are emphasized. Prerequisite: Concurrent enrollment in ARCFT 116. (SCC)

ARCFT 116 — Introduction to General Aircraft Maintenance Shop (1-4 cr)
Students learn practical applications to basic aerodynamics and the use of tools and equipment. Basic mechanics techniques, materials and processes are emphasized. FAA regulations, weight and balance control, basic electrical systems, and instrumentation are covered. Prerequisite: Concurrent enrollment in ARCFT 115. (SCC)

ARCFT 117 — General Aircraft Maintenance (1-5 cr)
Students learn advanced concepts of ARCFT 115 including the use of tools and equipment, basic mechanics techniques, materials and processes. FAA regulations, weight and balance control, basic electrical systems, and instrumentation are emphasized. Prerequisite: ARCFT 115. (SCC)

ARCFT 118 — General Aircraft Maintenance Shop (1-4 cr)
Students learn advanced applications to aerodynamics and the use of tools and equipment. Advanced mechanics techniques, materials and processes are emphasized. FAA regulations, weight and balance control, electrical systems, and instrumentation applications are offered. Prerequisite: ARCFT 116 and concurrent enrollment in ARCFT 117. (SCC)

ARCFT 119 — Advanced General Aircraft Maintenance (1-5 cr)
Students are introduced to advanced concepts offered in ARCFT 117. The use of tools and equipment, basic mechanics techniques, materials, and processes are emphasized. A review of FAA regulations, weight and balance control, advanced electrical systems, and instrumentation concepts are presented. Prerequisite: ARCFT 117 and concurrent enrollment in ARCFT 120. (SCC)

ARCFT 120 — Advanced General Aircraft Maintenance Shop (1-4 cr)
Students apply advanced knowledge of aerodynamics and use of tools and equipment. Advanced mechanics techniques, materials and processes are emphasized. A review of FAA regulations, weight and balance control, electrical systems, and instrumentation applications are offered. Prerequisite: ARCFT 118 and concurrent enrollment in ARCFT 119. (SCC)

ARCFT 123 — Composite Technology (5 cr)
Develops a knowledge of: History of composites, composite fabrication, inspection and repair of composites. Methods covered include preimpregnated, wet lay up, vacuum infusion process, and Resin Transfer Molding. Emphasis is placed on health and safety. (SCC, IEL)

ARCFT 131 — Composite Structure Assembly (5 cr)
Learners will utilize appropriate materials and processes to assemble structures made of composite materials. Lab experience will also cover mold making and safety in handling resins, reinforcements, and related materials. Prerequisite: ARCFT 123. (SCC, IEL)

ARCFT 132 — Applied Manufacturing Project (2 cr)
Students practice applied projects related to fabrication techniques that may include interdepartmental projects, CAD design, shop skills, measuring, fabrication, machining, composites, and quality control. (SCC, IEL)

ARCFT 135 — Basic Airframe Maintenance (1-5 cr)
This course introduces students to basic aerodynamics, woodworking, aircraft fabric finishing, and aircraft sheet metal and welding. Prerequisite: ARCFT 119 and concurrent enrollment in ARCFT 136. (SCC)

ARCFT 136 — Basic Airframe Maintenance Shop (1-5 cr)
Students apply their skills in woodworking, aircraft fabric and finishing, and aircraft sheet metal and welding. Prerequisite: ARCFT 120 and concurrent enrollment in ARCFT 135. (SCC)

ARCFT 137 — Airframe Structures (1-5 cr)
This course presents concepts in aircraft sheet metal, aircraft assembly and disassembly, and rigging. Prerequisite: ARCFT 135 and concurrent enrollment in ARCFT 138. (SCC)

ARCFT 138 — Airframe Structures Shop (1-5 cr)
Students apply their knowledge in aircraft sheet metal, aircraft assembly and disassembly, controls and control surfaces, and rigging. Prerequisite: ARCFT 136 and concurrent enrollment in ARCFT 137. (SCC)

ARCFT 139 — Airframe Systems (1-5 cr)
Students are introduced to aircraft airframe 100-hour and annual inspections, aircraft landing gear systems, and hydraulic and pneumatic systems. Prerequisite: ARCFT 137 and concurrent enrollment in ARCFT 140. (SCC)

ARCFT 140 — Airframe Systems Shop (1-5 cr)
Students prepare for aircraft airframe 100-hour and annual inspections, aircraft landing gear systems, and hydraulic and pneumatic systems. Prerequisite: ARCFT 138 and concurrent enrollment in ARCFT 139. (SCC)

ARCFT 235 — Advanced Airframe Systems (1-5 cr)
Students learn various types of aircraft systems including instrument and electrical, navigation and communication, and position and warning classifications. Prerequisite: ARCFT 139 and concurrent enrollment in ARCFT 236. (SCC)

ARCFT 236 — Advanced Airframe Systems Shop (1-5 cr)
This course emphasizes the applications of various aircraft systems including instrument and electrical, navigation and communication, and position and warning systems. Prerequisite: ARCFT 140 and concurrent enrollment in ARCFT 235. (SCC)

ARCFT 237 — Integrated Airframe Powerplant Maintenance (1-5 cr)
This course includes theory and practice of integrated aircraft inspections, ice and rain control systems, and fire protection systems. Prerequisite: ARCFT 235 and concurrent enrollment in ARCFT 238. (SCC)

ARCFT 238 — Integrated Airframe Powerplant Maintenance Shop (1-5 cr)
Students apply their skills in the practice of integrated aircraft inspections, ice and rain control systems, and fire protection systems. Prerequisite: ARCFT 236 and concurrent enrollment in ARCFT 237. (SCC)

ARCFT 245 — Aircraft Engines I (1-5 cr)
This course addresses theoretical and practical instruction in aircraft engine theory as well as maintenance and inspection. Prerequisite: ARCFT 119 and concurrent enrollment in ARCFT 246. (SCC)

ARCFT 246 — Aircraft Engines Shop I (1-5 cr)
Students apply the theories learned in ARCFT 245 with shop practice in theoretical and practical maintenance as well as servicing and inspecting aircraft engines. Prerequisite: ARCFT 120 and concurrent enrollment in ARCFT 245. (SCC)

ARCFT 247 — Aircraft Engines II (1-5 cr)
This course addresses theoretical and practical instruction in aircraft engine overhauls, maintenance, operation and inspections. Prerequisite: ARCFT 245 and concurrent enrollment in ARCFT 248. (SCC)

ARCFT 248 — Aircraft Engines Shop II (1-5 cr)
Students apply the theories learned in ARCFT 247 with shop practice in practical maintenance as well as servicing and inspecting aircraft engine overhauls, maintenance, operation and inspections. Prerequisite: ARCFT 246 and concurrent enrollment in ARCFT 247. (SCC)

ARCFT 255 — Powerplant Systems and Components I (1-5 cr)
This course offers practical and theoretical instruction in auxiliary powerplants; unducted fans; engine fire protection systems; lubrication systems; fuel and fuel metering systems; and engine electrical, ignition and starting systems. Prerequisite: ARCFT 247 and concurrent enrollment in ARCFT 256. (SCC)

ARCFT 256 — Powerplant Systems and Components I Shop (1-5 cr)
This course offers practical shop experience in powerplant systems including auxiliary powerplants; and fire, lubrication, fuel and electrical systems. Prerequisite: ARCFT 248 and concurrent enrollment in ARCFT 255. (SCC)

ARCFT 257 — Powerplant Systems and Components II (1-5 cr)
This course offers theory on propellers as well as powerplant airflow and cooling exhaust systems. Prerequisite: ARCFT 255 and concurrent enrollment in ARCFT 258. (SCC)

ARCFT 258 — Powerplant Systems and Components II Shop (1-5 cr)
This course offers practical shop experience in propeller maintenance as well as powerplant cooling and exhaust systems. Prerequisite: ARCFT 256 and concurrent enrollment in ARCFT 257. (SCC)

ARCFT 275 — Theory and Review - Airframe or Powerplant (1-10 cr)
This class provides students with additional time to meet Federal Aviation Administration (FAA) requirements. Grade option: Pass/fail. Prerequisite: Completion of all six quarters of ARCFT courses. (SCC)

ARCFT 276 — Airframe or Powerplant Shop (1-10 cr)
This class provides students with additional lab time to meet Federal Aviation Administration (FAA) requirements. Grading option: Pass/fail. Prerequisite: Completion of all six quarters of ARCFT courses. (SCC)

AVIATION/AIRWAY SCIENCE

AIRSC 100 — Aviation Orientation (2 cr)
This course is required for all airway science majors. Its purpose is to prepare new students for their college and professional careers by discussing students' responsibilities and options concerning the aviation industry. Aviation career options will be explored. Academic and airport requirements and procedures will be covered. (SFCC)

AIRSC 102 — Introduction to Aviation (6 cr)
This course includes the student's first exposure to aerodynamics of flight. It serves as a preparation for the private pilot written, oral and flight test required by the FAA for issuance of a private pilot certificate. Course content includes instruction in FAA regulations, weather, air and radio navigation, flight safety, and emergency procedures. Prerequisite: College-level reading and writing scores, MATH 091 or appropriate placement score and concurrent enrollment in AIRSC 110. (SFCC)

AIRSC 103 — Introduction to Meteorology (6 cr)
This course provides an introduction to meteorological principals such as precipitation, temperature, cloud types, humidity, latent heat, pressure, gas laws, wind, radiation and refraction. Prerequisite: Permission of instructor. (SFCC)

AIRSC 110 — Private Flight Lab (1 cr)
This course serves as a preparation for the practical test in issuance of a private pilot certificate that is taken on the completion of the AIRSC 120. Course content includes ground and flight instruction in the maneuvers and procedures prescribed in the FAA practical test standards booklet. Prerequisite: Concurrent enrollment in AIRSC 102. (SFCC)

AIRSC 120 — Private Flight Lab II (1 cr)
This course serves as a preparation for the practical test in issuance of a private pilot certificate that is taken on the completion of this flight course. Course content includes ground and flight instruction in the maneuvers and procedures prescribed in the FAA practical test standards booklet. Prerequisite: AIRSC 110 and concurrent enrollment in AIRSC 121. (SFCC)

AIRSC 121 — Basic Attitude Instrument Flying (3 cr)
This course includes an in-depth study of basic attitude instrument flying. In addition, the operation, interpretation and practical use of VOR, ADF, DME, RNAV, RMI, HIS, and Flight Director systems are studied. The course also includes the different types of instrument charts required for IFR flight. Prerequisite: AIRSC 102 and concurrent enrollment in AIRSC 150. (SFCC)

AIRSC 122 — IFR Regulations and Procedures (3 cr)
This course provides a detailed study of the regulations, procedures and publications necessary for operating IFR in the national airspace system. Terminal and en route procedures also are studied in detail. Prerequisite: AIRSC 121 and concurrent enrollment in AIRSC 250. (SFCC)

AIRSC 150 — Commercial Flight Lab I (2 cr)
This course includes an in-depth practical study of basic attitude instrument flying and developing the student's cross-country skills to a commercial pilot standard prescribed in the commercial FAA practical test standards booklet. Prerequisite: AIRSC 102 and concurrent enrollment in AIRSC 121. (SFCC)

AIRSC 203 — Aviation Meteorology (5 cr)
This course studies weather information as related to aviation, such as basic weather, reading/interpreting charts, texts, observations and forecasts. This course also includes Aeronautical Decision Making, application of information to decision process and aviation weather hazards. Prerequisite: AIRSC 103. (SFCC)

AIRSC 223 — Aerodynamics-Airplanes (3 cr)
This course provides a study of aerodynamics, performance, stability, control, weight and balance, and special flight conditions as appropriate for commercial pilots. A discussion of commercial maneuvers and flight computers also is included. Prerequisite: AIRSC 122 and concurrent enrollment in AIRSC 224, 260. (SFCC)

AIRSC 224 — Aircraft Systems and Instruments (3 cr)
This course provides an in-depth study of flight instruments. Reciprocating engine, propeller, electrical, environmental, hydraulic, pneumatic, fuel, ignition, lubrication and pressurization systems also are studied. Prerequisite: AIRSC 250 and concurrent enrollment in AIRSC 223. (SFCC)

AIRSC 225 — Multiengine Systems and Procedures (3 cr)
This course covers the operations necessary to operate light twin-engine aircraft. Normal and abnormal procedures are included along with a discussion of the systems and aerodynamics normally associated with these aircraft. Regulations for commercial pilots also are included. Prerequisite: AIRSC 224 and concurrent enrollment in AIRSC 270. (SFCC)

AIRSC 250 — Commercial Flight Lab II (2 cr)
This flight course provides detailed flight experience for the practical use of regulations and procedures necessary to fly safely in IFR conditions. Prerequisite: AIRSC 150 and concurrent enrollment in AIRSC 122. (SFCC)

AIRSC 260 — Commercial Flight Lab III (2 cr)
This flight course provides the flight experience required to possess the flight skills of a commercial pilot prescribed by the FAA practical test standards. Prerequisite: AIRSC 250 and concurrent enrollment in AIRSC 223. (SFCC)

AIRSC 270 — Multiengine Flight Lab (2 cr)
This flight course provides the student with the commercial and instrument skills in the multiengine aircraft required by the FAA practical test standards booklet. Prerequisite: AIRSC 260 and concurrent enrollment in AIRSC 225. (SFCC)

BAKING: PROFESSIONAL PASTRIES AND SPECIALTY CAKES

BAK 101 — Introduction to Baking and Pastries (1 cr)
Students learn terminology of basic baking and methods such as ingredient identification, volume, weights and measurements, and mixing types. (SCC)

BAK 110 — Artisan Breads (5 cr)
Students learn to create hand-crafted, preservative-free breads with natural starters, long-fermentation periods and use of sponges and sour starters. (SCC)

BAK 111 — Pastries (7 cr)
Students learn to produce a variety of yeast breads including Danish, cinnamon rolls, coffee cakes, croissants, artisan and specialty pastries. (SCC)

BAK 120 — Special Occasion Cakes (2 cr)
This course introduces students to techniques needed to produce birthday, wedding and anniversary cakes. (SCC)

BAK 121 — Tortes and Gateau (2.5 cr)
Students learn to produce a variety of European style torts and gateau, bakery style cakes, and sculptured and wedding cakes. (SCC)

BAK 130 — Sculptured Cakes (2.5 cr)
Students learn advanced techniques in producing sculptured, hand-crafted specialty occasion cakes. (SCC)

BAK 131 — Rolled Fondant (2.5 cr)
This course emphasizes the development of advanced techniques in European rolled fondants. (SCC)

BAK 140 — Yeast Doughs (1 cr)
This course introduces students to a variety of mixing methods used to create yeast doughs and breads. (SCC)

BAK 248 — Wedding Cakes (2.5 cr)
Students learn advanced techniques in decorating artistic wedding cakes. (SCC)

BAK 266 — Cooperative Education Seminar (1-2 cr)
For course description, see Cooperative Education. (SCC)

BAK 267 — Cooperative Education Work Experience (1-18 cr)
For course description, see Cooperative Education. (SCC)

BAK 288 — Cooperative Education Work Experience (No Seminar) (1-18 cr)
For course description, see Cooperative Education. (SCC)

BIOLOGY

BIOL 100 — Environmental Biology (5 cr)
This course is the study of man in his environment for nonscience majors and vocational program students. Biological concepts presented in this course include energy production and utilization, waste generation and disposal, population growth and control, and ecosystem construction and destruction. How these concepts are influenced by human activities is emphasized. This course meets A.A. lab science requirements. (SCC, SFCC)

BIOL 110 — Insects and People (5 cr)
This course is a systematic approach to study insect interactions with one another, their physical and chemical environments, and with people. The course includes competition within and between populations and extends through communities, ecosystems and the biosphere with emphasis on interactions among insects and humans. (SFCC)

BIOL 115 — Biology for Elementary Education (5 cr)
This course Introduces cellular, organismal, and ecosystem biology, including human systems, for students majoring in elementary education. Inquiry based biological investigations that support science instruction outlined in the National Science Education Standards and Washington Essential Academic Learning Requirements are emphasized. Prerequisite: Permission of instructor. (SCC)

BIOL 120 — Scientific Investigation (5 cr)
This course introduces students to laboratory investigation. Scientific method, observation and maintaining a scientific notebook are presented. A brief history of science, the nature of matter, tests of validity and statistical methods, and the role of scientists in society are emphasized. Laboratory exercises include measurement and the metric system, light absorbency and spectrophotometry, charge attraction and repulsion, and working with living organisms, including the use of microscopes also are presented. A term paper with two or more revisions is required. (SCC)

BIOL& 160 — General Biology w/Lab (5 cr)
An integrated view of the living world including the nature of sciences, evolution of biological organization, composition and organization of living substances, metabolism, control, reproduction, heredity and ecological relationships. (SCC, SFCC)

BIOL& 221 — Majors Ecology/Evolution: w/Lab (5 cr)
Intended for students majoring in life sciences, this course provides an introduction to ecology and evolution. Topics cover the origin, evolution, and characteristics of living things and the processes that influence them. Prerequisite: BIOL& 222. (SCC, SFCC)

BIOL& 222 — Majors Cell/Molecular: w/Lab (5 cr)
Intended for students majoring in life sciences, this course provides an introduction to cellular and molecular biology. Topics include cells, cellular respiration, photosynthesis, the cell cycle and genetics. It also fulfills introductory biology requirement for the health sciences. A prior course in chemistry is highly recommended. (SCC, SFCC)

BIOL& 223 — Majors Organismal Phys: w/Lab (5 cr)
Intended for students majoring in life sciences, this course explores how plants and animals work. Topics covered include development, transport, nutrition, osmoregulation, sensory systems, and reproduction. Prerequisite: BIOL& 222. (SCC, SFCC)

BIOL 229 — Field Studies (1 cr)
Coastal temperate rain forest and marine environments are investigated as students prepare specialized topics. Emphasis on integration of topics by visiting ecosystems on the Olympic Peninsula and participating in discussions. Prerequisite: Concurrent enrollment in BIOL& 222 or ZOOL 121 or BOT 113 or permission of the instructor. (SFCC)

BIOL 237 — Introduction to Immunology (5 cr)
This course focuses on human immune response, antibodies, receptors and immunochemical techniques. The nature of primary interaction with antigens is explored, as well as the origin of immune diversity. Topics include innate vs. acquired immune responses, hypersensitivity, transplantation, immunodeficiency and autoimmune disorders. (SCC)

BIOL& 241 — Human A & P 1 (5 cr)
Human body structure and function with emphasis on introductory cytology and histology; the skeletal, muscular and nervous systems; and the sense organs. Prerequisite: BIOL& 160 or permission of instructor. (SCC, SFCC)

BIOL& 242 — Human A & P 2 (5 cr)
Continued study of human body structure and function with emphasis on circulatory, respiratory, digestive, urinary, endocrine and reproductive systems. Prerequisite: BIOL& 241. (SCC, SFCC)

BIOL 244 — Genetics (5 cr)
This course introduces basic principles of inheritance, the significance of the cell cycle events to variation, genetic links to physical traits, mutations, DNA repair, gene analysis and linkage. Applications and molecular techniques such as DNA sequencing, cloning, genomics and proteomics are introduced. Classical experimental methods and findings are examined in detail. Problem-solving skills that require logic and mathematical understanding are emphasized. Prerequisite: BIOL& 160 or BIOL& 222. (SCC, SFCC)

BIOL& 260 — Microbiology (5 cr)
Introduction to the study of bacteria, viruses, rickettsiae, spirochetes, fungi and protozoa with emphasis on microbial structure, physiology, genetics, physical and chemical control, and the role of microorganisms in disease and immunology. Laboratory includes staining, media making, isolation, cultivation and identification techniques of bacteria. Meets A.A. degree lab science requirement. Prerequisite: BIOL& 160, CHEM 101 recommended. (SCC, SFCC)

BIOL 280 — Human Cadaver Prosection (3 cr)
This is a three-credit laboratory dissection course in which students dissect a human cadaver. Dissections focus on internal organ systems and are conducted by body region in the following areas: Head, thorax, abdomen, pelvis and cranium. Areas of study include regional surface anatomy, compartments, anatomical and physiological relationships, musculoskeletal structures, vasculature, and nerve supply of the extremities. Class can be repeated up to three times allowing student to develop beginning, intermediate and advanced dissection skills and knowledge. (Repeatable up to 9 credits). Prerequisite: BIOL& 242 and permission of instructor. (SFCC)

BIOMEDICAL EQUIPMENT TECHNICIAN

BIOEQ 199 — Medical Terminology for Biomedical Equipment Technology (2 cr)
This course presents a study of basic medical terminology for students interested in the field of biomedical equipment technology. Prefixes, suffixes, word roots, combining forms, special endings, plural forms and abbreviations are included in the content. A programmed learning, word building system is used to learn word parts that are used to construct or analyze new terms. Definitions, word usage and pronunciation are emphasized. Prerequisite: Permission of the instructor and enrollment in the biomedical equipment technician program. (SCC)

BIOEQ 241 — Biomedical Circuits and Devices (7 cr)
Students continue to learn electronics fundamentals. Individual circuits using such devices as EETs, UJTs, SCRs, and Linear ICs with emphasis on amplifiers and switching circuits. All circuits presented are directly related to the applications used within biomedical equipment. Prerequisite: ELECT 131, 132 and permission of instructor and concurrent enrollment in BIOEQ 243. (SCC)

BIOEQ 242 — Physiology for Biomedical Equipment Technology (3 cr)
Students learn the underlying physiological principles with which medical equipment is designed to interface. A specific level of understanding is expected of students, with emphasis on the cells and the nervous, muscular, circulatory and respiratory systems. Prerequisite: Permission of the instructor and enrollment in the Biomedical Equipment Technician program and concurrent enrollment in BIOEQ 251, 252. (SCC)

BIOEQ 243 — Biomedical Circuit Laboratory (6 cr)
Students receive hands-on experience with the circuits learned in BIOEQ 242, which reinforces the concepts presented. Prerequisite: ELECT 131, 132 and concurrent enrollment in BIOEQ 241. (SCC)

BIOEQ 251 — Biomedical Instrumentation Patient Monitoring and Clinical (10 cr)
Students learn the operation of several biomedical instruments by thorough analysis of electronic circuitry. These instruments are directly related to patient monitoring and clinical applications. Prerequisite: Permission of the instructor and enrollment in the Biomedical Equipment Technician program and concurrent enrollment in BIOEQ 242, 252. (SCC)

BIOEQ 252 — Biomedical Instrumentation Laboratory (6 cr)
Students receive hands-on experience with circuits and equipment discussed in BIOEQ 251. Prerequisite: Permission of the instructor and enrollment in the BioMedical Equipment Technician program and concurrent enrollment in BIOEQ 242, 251. (SCC)

BIOEQ 261 — General Medical Instrumentation (5 cr)
Students learn to operate several medical instruments. The principles of operation, calibration and typical problems are emphasized. (SCC)

BIOEQ 262 — Hospital and Patient Safety (2 cr)
Students learn to solve specific problems through case studies. Risk management, liability and safety programs are evaluated with emphasis on electrical safety. The use of safety standards and codes are presented. Prerequisite: Sixth-quarter biomedical equipment technician students only. (SCC)

BIOEQ 263 — Introduction to Digital Electronics (14 cr)
This course is designed to give a systematic approach to the analysis of digital circuitry with applications specifically related to medical equipment. Laboratory projects provide hands-on reinforcement of concepts presented. Microprocessor, memory systems and microcontrollers will be studied. Prerequisite: BIOEQ 241. (SCC)

BIOEQ 271 — Biomedical Equipment Technology Clinical Rotation (10 cr)
Students are assigned to specific healthcare facilities and apply their knowledge to develop additional skills which enhance their understanding of healthcare environments. Their learning experience is strengthened by functioning within those environments. Prerequisite: BIOEQ 242, 251, 252 and concurrent enrollment in BIOEQ 272. (SCC)

BIOEQ 272 — Biomedical Seminar (4 cr)
Students discuss technical problems, ethics, safety concerns and other situations that may develop during clinical rotation. Students are assisted with the final draft of their resumes. Prerequisite: BIOEQ 242, 251, 252 and concurrent enrollment in BIOEQ 271. (SCC)

BOTANY

BOT 111 — Botany: Plant Structure and Function (5 cr)
A study of anatomy, physiology and genetics of flowering plants. Meets A.A. degree lab science requirement. Prerequisite: BIOL& 160. (SCC, SFCC)

BOT 112 — Botany: Survey of the Plant Kingdom (5 cr)
Representative types of plants from the major groups of the plant kingdom with emphasis on structure and taxonomy. Meets A.A. degree lab science requirement. Prerequisite: BIOL& 160. (SCC, SFCC)

BOT 113 — Field Botany (5 cr)
Proficiency acquired in use of plant identification keys. Through laboratory experiences and field trips the student will learn to collect, press and identify by species any plants in Southeastern Washington. Meets A.A. degree lab science requirement. Prerequisite: BIOL& 160 or permission of instructor. (SFCC)

BUSINESS TECHNOLOGY

BT 100 — Beginning Keyboarding (1 cr)
Students learn computer word processing skills using the keyboard and 10-key pad. Developing speed and accuracy is emphasized; no production work. SCC only: Grading option: Pass/fail. (SCC, SFCC)

BT 101 — Keyboarding (5 cr)
Students learn beginning computer keyboarding that includes the mastery of the alphabetic keyboard using the "key-by-touch" method. Word processing software is presented in conjunction with formatting theory for personal and business letters, memoranda, reports, centering and simple tabulation techniques. Students develop proofreading and editing skills. (SCC, SFCC)

BT 102 — Document Processing (5 cr)
This course covers formatting theory and application instruction for personal and business letters, tables, memoranda, and reports using word processing software. Commonly used word processing software features are presented. Instruction includes the development of proofreading, editing, formatting and mechanics of written expressions. Speed and accuracy are emphasized. This course is a continuation of BT 101 or utilized as a refresher course for those who have been away from a keyboard. Prerequisite: BT 101 and 30 wpm. (SCC, SFCC)

BT 103 — Formatting (5 cr)
Word processing software features, letters, memoranda, tables, reports and special business forms formats are taught. Techniques for speed and accuracy development are presented, and instruction includes the development of proofreading, editing, formatting and mechanics of written expression. Prerequisite: BT 102 or permission of instructor. (SFCC)

BT 104 — Basic Grammar for Business I (5 cr)
Students review the fundamentals of grammar including basic parts of speech, writing simple sentences, and subject/verb identification and agreement. Prerequisite: Reading assessment score of 20-39 percentile. (SCC)

BT 105 — Basic Grammar for Business II (5 cr)
Students review fundamental writing skills with major emphasis on improving sentence structure and grammar. Accuracy in spelling, punctuation, vocabulary and proofreading is stressed. Prerequisite: BT 104. A reading score of at least 33 on the ASSET or 59 on the COMPASS is acceptable in lieu of BT 104. (SCC)

BT 107 — Business Communications (3 cr)
This class offers a comprehensive review of correct grammar usage and spelling. (SFCC)

BT 108 — Business Communications (3 cr)
This class concentrates on the mechanics of punctuation and continued review of spelling. Prerequisite: BT 107. (SFCC)

BT 109 — Business Communications (5 cr)
This course reinforces basic writing skills. Those skills are then applied in the process of crafting various business documents with appropriate styles and strategies for specific goals with targeted audiences. Prerequisite: Score on the writing component of the Compass or Asset test of 80% or better or 2.0 grade or better in BT 105. (SCC)

BT 121 — Office Procedures Update (1-3 cr)
A course or courses to include selected material from the following procedural areas: receptionist duties, telephone skills, mail handling, reprographics, ordering and storage of supplies, office careers, travel arrangements, meeting planning and taking of minutes, filing and records management, financial transactions, time management, and office management. (SCC, SFCC)

BT 123 — Written Communication Skills Update (1-3 cr)
This course includes selected materials from the following skill areas: basic business grammar, grammar and punctuation review, proofreading, editing, business letter composition, and report preparation. (SCC, SFCC)

BT 124 — Office Automation Update (1-3 cr)
This course includes selected material from the following areas: technology used in today's offices; application and evaluation of technological information; integration of applications; information management; organization and control; future technological developments and expectations; and technology as applied to calendaring, electronic mail, spreadsheets, records management and networking. (SCC, SFCC)

BT 127 — Human Relations and Professional Development (1-3 cr)
This course includes selected material from the following areas: how to get along with people on the job and in your life; the importance of communication; the qualities of business success; your professional and personal image; and the elements of personal development covering grooming, business dress, nutrition and exercise. (SCC, SFCC)

BT 128 — Office Math Applications (1-5 cr)
Students learn mathematical concepts for the office employee including review of addition, subtraction, multiplication and division, and the use of fractions, percentages and decimals as they pertain to business office applications. Students work with numbers and solve business problems using a 10-key pad including special features found on most modern business desk calculators and apply basic business math formulas. (SCC)

BT 151 — Business Student Preparation (5 cr)
Students increase the ability to succeed in college business courses. Skills necessary to reach educational objectives are presented including planning, test taking, communication skills, study techniques, question and answering skills, library use, and personal issues that face many students as they complete their business course requirements. (SCC)

BT 155 — Records Information Management (3 cr)
Records management emphasizes the principles and practices of effective management of information for both manual indexing and automated records systems. The basic manual indexing systems concept covers all standard indexing rules published by the Association of Records Managers and Administrators (ARMA). The automated records systems provide the opportunity to work with the kinds of computer databases encountered in business. The process of coordinating both the manual indexing rules and computer indexing rules are stressed. The course emphasizes the need to understand the record's life cycle-from creation to disposition-within the structure of any given organization. The course stresses the federal legislation designed to protect information and the privacy of the individual or organization. The course prepares the student for several career options within the records/information management field. (SFCC)

BT 160 — Job Preparation Techniques (3 cr)
Students prepare for the job search process. Self-analysis, goal setting, personal appearance and grooming, communicating ideas through individual and group presentations, resume writing, application cover letter writing, interviewing practice, and other techniques are emphasized. Prerequisite: Second-year student or permission of instructor. (SCC, SFCC)

BT 165 — Word Processing (5 cr)
Students learn word processing functions such as formatting, maintaining and printing documents including tables and long manuscripts. Using writing tools, manipulating text among and within documents, creating and formatting tables, adding visual appeal, creating charts, and importing data are emphasized. Formatting with macros and styles, and sorting and selecting text and data are presented using Microsoft Word. Critical thinking skills, the mechanics of written expression, proofreading, editing and formatting are included. Prerequisite: BT 102 with a minimum of 2.0 grade or permission of instructor. (SCC)

BT 170 — WordPerfect 1 (2 cr)
This course is the introductory course in a series of courses designed to develop proficiency in the use of WordPerfect. The focus of this course is basic formatting and editing applications. Prerequisites: Basic keyboarding skill. (SFCC)

BT 172 — Publisher (2 cr)
This class offers beginning and advanced instruction in Microsoft Publisher. (SFCC)

BT 186 — Customer Service for Travel (2 cr)
This class reviews marketing principles and selling skills for successful travel sales, including effective customer service techniques and strategies to build a loyal customer base. (SFCC)

BT 196 — Skillbuilding (1 cr)
This individualized program builds keyboarding speed and improves accuracy. It may be taken a maximum of three times. Grading option: Pass/fail. Prerequisite: Ability to keyboard by touch. (For SCC: BT 196. For SFCC: BT 196, 197, 199). (SCC, SFCC)

BT 197 — Skillbuilding (1 cr)
This individualized program builds keyboarding speed and improves accuracy. It may be taken a maximum of three times. Grading option: Pass/fail. Prerequisite: Ability to keyboard by touch. (For SCC: BT 196. For SFCC: BT 196, 197, 199). (SFCC)

BT 199 — Skillbuilding (1 cr)
This individualized program builds keyboarding speed and improves accuracy. It may be taken a maximum of three times. Grading option: Pass/fail. Prerequisite: Ability to keyboard by touch. (For SCC: BT 196. For SFCC: BT 196, 197, 199). (SFCC)

BT 201 — Information Processing (5 cr)
Information processing techniques using word processing, database, spreadsheet and presentation software are taught in this course. Students complete office projects requiring critical thinking and problem-solving skills. Assignments include producing reports using information from databases and spreadsheets, formatting intricate tables and graphs, and correspondence with special features. Prerequisite: For SCC: BT 165 with a 2.0 or better. For SFCC: Permission of instructor. (SCC, SFCC)

BT 202 — Advanced Information Processing (5 cr)
Students utilize advanced features of spreadsheet, database and presentation software and integrate these software programs with word processing. Critical thinking and problem-solving skills are emphasized by focusing on proofreading, editing and the mechanics of written expression. Prerequisite: BT 201. (SCC)

BT 231 — Office Procedures (5 cr)
This course presents the basic office duties of a receptionist. Answering the telephone, mail handling, reprographics, ordering and storage of supplies. Professionalism and human relations concepts also are presented. Guest speakers and tours may be scheduled. Prerequisite: BT 102. (SCC, SFCC)

BT 232 — Office Procedures II (5 cr)
This course prepares students to handle advanced office tasks required of an administrative assistant. Projects require using technology and organizational skills in handling office communications and managing meetings. Critical-thinking and decision-making abilities are emphasized. Prerequisite: Permission of instructor. (SFCC)

BT 233 — Directed Office Practice (3-6 cr)
Students perform at beginning, intermediate and/or advanced levels of office work in a professional environment. A minimum of one or two hours of lab daily is required. Prerequisite: Permission of instructor. (SCC)

BT 234 — Administrative Professional Practicum (5 cr)
Students gain hands-on experience using current integrated office software while working at their own office work stations using electronic mail, calendaring, scheduling and graphics. Students complete simulated office projects requiring application of information, work organization, perception, human relations skills, prioritizing and decision-making skills. Prerequisite: Permission of instructor. (SFCC)

BT 235 — Machine Transcription (5 cr)
Machine transcription techniques are presented in this course and demonstrated with emphasis on language mechanics, including spelling, punctuation, grammar, style, capitalization, abbreviation, word division and expression of numbers. Word processing software is used to achieve these goals. Prerequisite: For SCC: BT 109 with a 2.0 and 50 wpm. For SFCC: BT 102, 107, 108 or permission of instructor. (SCC, SFCC)

BT 240 — Administrative Office Procedures (8 cr)
This course provides office-related situations including decision-making and critical thinking activities. Planning international travel, developing and conducting a seminar, choosing resources, and selecting guest presenters are included. Tours of local businesses are scheduled. Prerequisite: BT 235 with a 2.0 grade or better and keyboarding speed of at least 50 wpm. (SCC)

BT 241 — Office Politics (3 cr)
This course provides insight into the political and working relationships encountered in the business world. Emphasis is given to the importance of self-understanding and the bearing this has on working successfully in a business environment. (SCC)

BT 250 — Information Technology (5 cr)
This course provides an overview of office information systems for students entering administrative office careers. Students explore office technology. Microcomputer operation and hardware, the Internet, multimedia, electronic record systems are addressed. Students learn to evaluate and purchase office technology, set up a microcomputer, install software, and identify and troubleshoot problems commonly faced by administrative office professionals. (SCC)

BT 255 — Business Productivity Tools (3 cr)
This course is designed to prepare students to use computerized business productivity tools to support the functions of management: planning, organizing, leading and controlling. Students will design, customize and implement a variety of business applications. (SFCC)

BT 257 — Presentation Graphics/Publishing (5 cr)
This course is designed to prepare students to create desktop publishing documents for a typical office. Students will be able to design a variety of publications used in an office such as newsletters, letterheads, flyers, and brochures using the latest software. Students will apply design concepts and use appropriate media to present material. Prerequisite: Permission of instructor. (SCC, SFCC)

BT 258 — Desktop Publishing (5 cr)
This course is designed to prepare students to create desktop publishing documents for a typical office. Students will be able to design a variety of publications used in an office such as newsletters, letterheads, flyers, and brochures using the latest software. Students will apply design concepts and use appropriate media to present material. Prerequisite: Permission of instructor. (SFCC)

BT 260 — Administrative Office Management (5 cr)
Students are presented with the fundamental principles of office organization and management as applied to business enterprises. Flow of work, routines, equipment and systems are studied. Prerequisite: Second year standing. (SCC, SFCC)

BT 263 — Integrated Office Applications (5 cr)
Students use advanced software and learn to process handwritten, dictated and stored office documents. Developing, formatting, proofreading and editing documents also are included. The mechanics of written expression, critical thinking skills, technical problem solving and software related troubleshooting skills are emphasized. Prerequisite: For SCC: BT 201 and BT 235 with a 2.0 or better and keyboarding at 50 wpm. (SCC, SFCC)

BT 266 — Cooperative Education Seminar (1-2 cr)
For course description, see Cooperative Education. (SCC, SFCC)

BT 267 — Cooperative Education Work Experience (1-18 cr)
For course description, see Cooperative Education. (SCC, SFCC)

BT 270 — Office Computer Support (3 cr)
Students learn how an employee in an office can troubleshoot, maintain office computers, networks, and peripherals. Practical hands-on experience emphasizes the analysis of problems. Prerequisite: IS 120, 160 or permission of instructor. Recommended second year course. (SFCC)

BT 272 — Business Correspondence (5 cr)
Students learn to compose common types of business correspondence including the various types of letters, memos and reports. Prerequisites: SCC: Typing proficiency and BT 109 with a 2.0 or better and SFCC: BT 107, 108 or ENGL& 101. (SCC, SFCC)

BT 280 — Project Management for the Office (2.5-5 cr)
Students learn the key elements of project management. Students also conduct problem analysis, and develop action plans and cost/benefit analysis using project management software to assist in developing and managing their plans. Prerequisite: Second-year student. (SCC)

BT 285 — Administrative Professional Internship (2-3 cr)
Students apply their office and human relation skills during this two-week assignment at an area business. Internship sites are tailored to meet individual student needs to complement the student's program. SFCC Grading option: Pass/Fail. Prerequisite: For SFCC: BT 160 or concurrent enrollment in BT 160 and permission of instructor. (SCC, SFCC)

BT 288 — Cooperative Education Work Experience (No Seminar) (1-18 cr)
For course description, see Cooperative Education. (SCC)

BUSINESS, GENERAL

BUS 100 — Money Management (3 cr)
Students are introduced to managing all phases of family finances. Tips and techniques to help consumers survive on a limited budget are presented. Subjects include obtaining and using credit; saving money on food, financial services, automobiles, clothing, major appliances, insurance, travel, renting an apartment or buying a home. Students develop personal financial statements and budgets for future use. (SCC, SFCC)

BUS& 101 — Intro to Business (5 cr)
Students are introduced to the broad field of business and its organization, operation and management. Business opportunities, ownership, marketing, physical factors, human resources, finance, regulations and decision-making processes are emphasized. (SCC, SFCC)

BUS 102 — Math Skills for Business (3 cr)
Vocational number skills with or without the use of calculators are presented in the course. Rounding, decimals, fractions, percents, word problems and using special functions on a calculator are emphasized. Applications include commissions, discounts, invoices, checking accounts and interest. (SCC, SFCC)

BUS 103 — Basic Business Math and Electronic Calculators (5 cr)
Students work with numbers and solve business problems using a 10-key pad including special features found on most modern business desk calculators and apply basic business math formulas. (SCC, SFCC)

BUS 104 — Business Mathematics (5 cr)
Practical problems in the various fields of business including a review of fundamentals are emphasized in this course. Financial statements, buying and selling goods, simple and compound interest and discounts, annuities, sinking fund and amortization, consumer credit, and stocks and bonds are presented. Prerequisite: BUS 103. (SCC, SFCC)

BUS 105 — Principles of Leadership (3 cr)
Students learn several theoretical approaches to leadership applicable within various organizational contexts including profit and nonprofit settings. Experiential learning, self-analysis instruments, role playing, case studies and related learning approaches are used to demonstrate the application of leadership principles. Selected skills and values associated with leadership success are taught. (SFCC)

BUS 107 — Introduction to Electronic Calculators (1 cr)
Students learn to perform basic operations of an electronic calculator and develop a reasonable combination of speed and accuracy. (SCC, SFCC)

BUS 108 — eBusiness (2 cr)
This course is an introduction to the basics of using the Internet as a marketing medium. Special emphasis is placed on searching, exploring and establishing a commercial presence on the World Wide Web. Topics include effective search strategies, examples of outstanding web sites, and guidelines for creating persuasive home pages. The course also allows the student to create a marketing plan. Prerequisite: Browser and word processing courses or permission of instructor. (SFCC)

BUS 109 — Internet Marketing (3 cr)
Students focus on using the Internet as a communication medium to market business. Elements of a marketing plan as they relate to e-commerce are introduced. Simple web site creation and promotion, on-line selling strategies, and the mechanics of e-commerce are presented. (SCC)

BUS 110 — Number Skills (1 cr)
This class is a review of basic number skills both with and without an electronic calculator. Topics include the arithmetic functions of addition, subtraction, multiplication and division. (SFCC)

BUS 111 — Math Skills (1 cr)
This class focuses on the important math skills involved in the process of estimating numbers and using the worldwide metric system. Prerequisite: BUS 110 or BMC Math Skills Test. (SFCC)

BUS 112 — Advanced Calculator Skills (1 cr)
This class covers special functions and operations of an electronic calculator. Topics include accumulation, fractions, percentages, powers and using machine memory. Prerequisite: BUS 110. (SFCC)

BUS 113 — Essential Business Applications (1 cr)
This class focuses on essential applications of business math using the electronic calculator and computer. Topics include word problems, simple and compound interest, percentages, commissions, inventory and payroll. Prerequisite: BUS 112. (SFCC)

BUS 114 — Basic Retail Application (1 cr)
This class covers the math techniques used for merchandising operations such as cash and trade discounts; invoices and transportation costs; and markups, markdowns and markons while using the special features available on an electronic calculator. Prerequisite: BUS 112. (SFCC)

BUS 120 — International Business (5 cr)
Students investigate the importance of international business and trade within the U.S., the Pacific Northwest, and Washington State as a way of promoting economic growth and future job opportunities. International people management, international finance and accounting, and international legal and political considerations are emphasized. Other topics addressed are the effects of culture, politics, ethics and communication on international business practices, and overseas marketing and advertising, using an interdisciplinary and multicultural approach. International career options and business opportunities are discussed. (SCC, SFCC)

BUS 122 — Practical Business Math (3 cr)
Utilize mathematical operations to solve practical business application problems. Core topics include review of basic addition, subtraction, multiplication, division, fractions and percents. Applications include bank reconciliation, simple interest and maturity values, compound interest, present and future values. (SFCC)

BUS 123 — Practical Business Math Applications (5 cr)
Utilize mathematical operations to solve practical business application problems. Core topics include review of basic addition, subtraction, multiplication, division, fractions and percents. Applications include bank reconciliation, simple interest and maturity values, compound interest, present and future values, the cost of installment buying, and the effects of paying off installment loans early versus on time and revolving charge credit cards. Additional topics covered are trade discounts, cash discounts, markups and markdowns, break even analysis, payroll calculations with employee pay deductions and employer responsibilities. (SFCC)

BUS 130 — International Finance (2 cr)
Students study the confusing world of international finance. Methods of payment for imports and receiving payment for exports are presented. National and international monetary systems, the role of foreign currency and foreign exchange, and international capital markets are emphasized. Basic concepts and practical applications and examples of international finance transactions are addressed. (SCC)

BUS 140 — International Marketing (3 cr)
The problems of marketing in the international arena and how marketers approach and solve them are addressed in this course. Theory and practice of international marketing through the use of practical examples and actual case studies of international marketing organizations are emphasized. (SCC, SFCC)

BUS 150 — International Economics (2 cr)
Student's survey selected international economic institutions and problems. Trade, balance of payments, monetary relations, economic development and multinational corporations are discussed. The importance for students to have a better grasp of international economics institutions as the U.S. economy becomes more dependent on the world economy is stressed. (SCC)

BUS 160 — International Management (3 cr)
This course is an overview of the complex, dynamic field of international management. Typical management functions (planning, organizing, staffing and controlling) focusing on cross-cultural and cross-national implications for business are emphasized. Recruitment, training, compensating and retention of a multinational workforce with an emphasis on increasing the effectiveness and efficiency of employees are covered. (SCC)

BUS 188 — Organizing and Leading Tours (2 cr)
This class is a practical guideline introducing the tools and techniques used in planning, organizing and leading tours. Topics range from arranging simple museum visits to the complex itinerary of an international trip. The course assists students in preparing for careers as tour guides, directors or planners. (SFCC)

BUS 192 — Special Business Topics (1-5 cr)
Students are provided a variety of pertinent, current business topics. Course content varies depending upon the number of credits and topics chosen. (SCC)

BUS 193 — Special Business Topics (1-5 cr)
Students are provided a variety of pertinent, current business topics. Course content varies depending upon the number of credits and topics chosen. (SCC)

BUS 194 — Special Business Topics (1-5 cr)
Students are provided a variety of pertinent, current business topics. Course content varies depending upon the number of credits and topics chosen. (SCC)

BUS& 201 — Business Law (5 cr)
Students learn fundamental principles of law and the legal system and their application and operation in society. Analysis of business fact situations, isolating issues and recognizing the need for appropriate legal counsel, and the exercise of preciseness of language and action in matters with legal significance are emphasized. (SCC, SFCC)

BUS 204 — Introduction to Law (5 cr)
Students study today's legal environment including the various types of law, analysis of the different courts and judicial systems. Tort law, consumer law, domestic relations and estate planning are emphasized. How judges make decisions and what type of relief they may grant are presented. (SCC, SFCC)

BUS 209 — Internet Project (3 cr)
This is the final project and the capstone course for the Internet certificate program. Students are required to develop a complete marketing plan on the Internet/World Wide Web, which culminates in the creation of a home page for a real business. Prerequisite: GRDSN 126. (SFCC)

BUS 217 — Business Statistics (5 cr)
The application and interpretation of statistics are presented in this course. Descriptive and inferential statistical methods that are most useful in marketing and business research studies are emphasized. Prerequisite: MATH 099 with a 2.0 or better or appropriate placement scores. (SCC, SFCC)

BUS 280 — Human Relations in Business (5 cr)
The needs of the business or other formal work institutions and how they interact with individual needs are covered in this course. Leadership styles, formal organizational policies and procedures, and general cultural patterns to determine how humans act in a work environment are emphasized. The manager's role in creating an acceptable and satisfying organizational climate is covered. (SCC, SFCC)

BUS 284 — Special Business Topics (1-5 cr)
Students are provided a variety of pertinent, current business topics. Course content varies depending upon the number of credits and topics chosen. (SCC)

BUS 285 — Special Business Topics (1-5 cr)
Students are provided a variety of pertinent, current business topics. Course content varies depending upon the number of credits and topics chosen. (SCC)

BUS 286 — Special Business Topics (1-5 cr)
Students are provided a variety of pertinent, current business topics. Course content varies depending upon the number of credits and topics chosen. (SCC)

BUS 295 — Special Topics in Business (0.5-3 cr)
This course focuses on unique current issues affecting business and business people. The topics and content vary each quarter. Emphasis is on jurisdiction of local, state and federal agencies; professional career opportunities and qualifications for recruitment within these agencies; an overview of police problems and the scope of the law enforcement officer's role. (SFCC)

CAD COMPUTER AIDED DESIGN AND DRAFTING

CAD 105 — Basic Blueprint Reading (2-3 cr)
This course introduces students to blueprint reading with emphasis on the interpretation of a variety of drafting styles. Students practice freehand sketching. (SCC, IEL)

CAD 114 — Engineering Graphics 1 (4 cr)
This course introduces students to fundamental drafting practices with emphasis on drawing methods used in architecture, mechanical engineering, civil/structural engineering and electronics. Drafting media, drawing reproduction and storage, the format of drawing arrangement, and the drafting tools used in manual drafting also are emphasized. (SCC)

CAD 124 — Engineering Graphics 2 (5 cr)
This course is an extension of CAD 114 with emphasis on drawing methods used in engineering. Dimensioning techniques, auxiliary views and sectioning methods also are emphasized. Prerequisite: CAD 114 and MET 125 or CAD 129. (SCC)

CAD 129 — Computer Aided Drafting (2-5 cr)
Students are introduced to the fundamentals of computer aided design (CAD) drafting. AutoCAD software using the principles of mechanical, architectural, civil and electrical/electronics is emphasized. Prerequisite: For MET and CAD students: CAD 114, MET 101 or approved equivalent. (SCC, IEL)

CAD 131 — Dimensioning and Tolerancing (3 cr)
This course introduces the use of geometric calculations and measuring instruments to determine true tolerances on detail drawings. Both linear tolerances and "Geometric Dimensioning and Tolerancing" formats are covered. Prerequisite: CAD 124, 129. (SCC)

CAD 132 — Engineering Graphics 3 (5 cr)
This course introduces the development of production-type working drawings. Drafting and CAD techniques used to create assembly and detail drawings in orthographic and pictorial formats are emphasized. Raw materials and general machine components also are introduced as well as the selection processes used in industry. Prerequisite: CAD 124 and MET 125 or CAD 129. (SCC)

CAD 135 — Schematics (3 cr)
This course introduces the basic development and preparation of schematic drawings for the manufacturing and construction trades. The combination of electronics, industrial electricity and hydraulic and pneumatic power components for machine control is emphasized. Types of drawings include schematic, logic, system, interconnection, wiring diagrams and programmable logic controls. (SCC)

CAD 241 — CAD Solid Modeling (3-5 cr)
This course offers advanced computer aided drafting techniques in three-dimensionalsolid modeling. Individual partfiles, assembly files, and application files in weldments and sheetmetal are emphasized. Solid model prototype printing and CNC applications are also included. Prerequisite: CAD 129 or equivalent. (SCC)

CAD 248 — Mechanical CAD Applications (4 cr)
This course introduces advanced concepts and applies CAD skills in mechanical engineering drafting and design projects. Students research and develop a comprehensive definition of this field as well as use CAD to create drafting projects and demonstrate the ability to present their projects in an engineering format. Prerequisite: CAD 132. (SCC)

CAD 252 — Advanced CAD (5 cr)
This course presents advanced concepts and applications for computer assisted drafting systems in an engineering environment. Advanced drafting techniques are included with emphasis on three-dimensional solid modeling. Software/hardware customization techniques including menus, start-up, CAD programming fundamentals and management skills are also emphasized. Prerequisite: CAD 241. (SCC)

CAD 258 — Schematic CAD Applications (4 cr)
This course introduces advanced concepts and applies CAD drafting skills in schematic engineering drafting and design projects. Students research and develop a comprehensive definition of this field as well as use CAD to create drafting projects and demonstrate the ability to present their projects in an engineering format. Prerequisite: CAD 132. (SCC)

CAD 259 — Architectural CAD Applications (3 cr)
This course introduces advanced concepts in CAD and applies these skills in introductory architectural drafting and design projects. Students research and begin to explore the definition of this field as well as use CAD to create drafting projects and demonstrate the ability to present their projects in an engineering format. Prerequisite: CAD 132. (SCC)

CAD 260 — Fabrication and Piping CAD Applications (3 cr)
This course introduces advanced concepts and applies CAD drafting skills in sheet metal/HVAC fabrication drafting and piping drafting projects. Students research and develop a comprehensive definition of this field as well as use CAD to create drafting projects and then demonstrate the ability to present their projects in an engineering format. Prerequisite: CAD 132. (SCC)

CAD 261 — Project Design (4 cr)
This advanced course is structured to correlate all technical disciplines covered in physics, statics, strength of materials and mathematics. Power transmission systems and power requirements, design techniques for specific mechanical advantage, efficiency and friction loss in mechanical systems, linear and angular time-motion concepts, stress determination and analysis, and structural member sizing are emphasized. Results of projects are presented in a formal engineering report format. Prerequisite: MET 250. (SCC)

CAD 268 — Structural CAD Applications (4 cr)
This course introduces advanced concepts and applies CAD skills in structural engineering drafting and design projects. Students research and develop a comprehensive definition of this field as well as use CAD to create drafting projects and demonstrate the ability to present their projects in an engineering format. Prerequisite: CAD 132. (SCC)

CAD 269 — Civil CAD Applications (4 cr)
This course introduces advanced concepts and applies CAD drafting skills in civil engineering drafting and design projects. Students research and develop a comprehensive definition of this field as well as use CAD to create drafting projects and then demonstrate the ability to present their projects in an engineering format. Prerequisite: CAD 132. (SCC)

CARPENTRY AND CABINETRY

CARP 113 — Carpentry Math (5 cr)
This course is an overview of basic math concepts and their applications to the carpentry field. (SCC)

CARP 114 — Transit Layout and Design (4 cr)
This course introduces students to the fundamentals of transit setup and use as it pertains to residential construction. Practical experience, including house layout, excavation, and foundation layout and design is emphasized. (SCC)

CARP 115 — Basic Construction Systems (7 cr)
This course is an introduction to residential construction methods and materials. Practical shop experience includes layout and design of footings and foundations; floor, wall, ceiling and roof framing; and materials estimation for all building aspects. (SCC)

CARP 123 — Cabinetry Math (3 cr)
This course continues with the concepts introduced in CARP 113. Linear, board, and square foot measurements, and using formulas to calculate material requirements and costs are emphasized. Prerequisite: CARP 113, 114, 115 or permission of instructor. (SCC)

CARP 124 — Cabinet Layout and Design (5 cr)
This course introduces the fundamentals of cabinet making. Design requirements, layout methods and installation practices are emphasized. An in-depth study of the types and uses of building materials and their application to cabinetry also is covered. Prerequisite: CARP 113, 114, 115 or permission of instructor. (SCC)

CARP 125 — Cabinet Construction (5 cr)
This course offers practical shop experience in layout, machining, and assembly of residential cabinetry. The use of tools such as table saws, jointers, radial arm saws, planers and shapers, and their use in the sizing, shaping, and preassembly process is emphasized. The application of hardware and plastic laminate countertops also is covered. (SCC)

CARP 126 — Cabinet Finishing (3 cr)
This course offers practical shop experience and techniques in finishing methods commonly used in the cabinetry field. Application of stains, sealers, and lacquers, and the proper use of a HVLP (high volume, low pressure spray system) is emphasized. Prerequisite: CARP 113, 114, 115 or permission of instructor. (SCC)

CARP 133 — Introduction to Estimating (3 cr)
This course offers practical applications and theory in estimation of materials for all phases of a building project. The use of construction plans and local building codes in determining the cost of materials is emphasized. Prerequisite: CARP 123, 124, 125, 126 or permission of instructor. (SCC)

CARP 134 — Introduction to Trim and Exterior Finish (3 cr)
This course introduces the materials and methods used in exterior finish work including door and window terminology, roofing and exterior siding materials, and soffit and gable end components. Prerequisite: CARP 113, 114, 115. (SCC)

CARP 135 — Practical Construction Applications (8 cr)
This course offers practical applications and on-the-job experience on an actual construction project utilizing all training experience and carpentry techniques learned in the previous quarters. An on-site project includes building layout, forming and pouring footings and walls, framing, roof construction, door and window installation, and exterior siding and trim work. Prerequisite: CARP 123, 124, 125, 126. (SCC)

CARP 136 — Residential Blueprint Reading (2 cr)
This course introduces the interpretation of residential blueprint reading emphasizing plan types, dimension lines, scaling prints, and the symbols and abbreviations common to a variety of construction plans. Prerequisite: CARP 123, 124, 125, 126 or permission of instructor. (SCC)

CARP 223 — Advanced Cabinetry Math (3 cr)
This course provides students with advanced skills in using formulas for calculation of a variety of projects. Prerequisite: CARP 123. (SCC)

CARP 224 — Advanced Cabinet Layout and Design (5 cr)
This course provides students with 77 hours of practical applications in the layout and design of custom cabinets. Prerequisite: CARP 124. (SCC)

CARP 225 — Advanced Cabinet Construction (5 cr)
This course provides practical shop experience in the cutting, marking and assembly of a variety of kitchen and bathroom cabinets. Students gain 110 hours of practice in advanced cabinet construction methods. Prerequisite: CARP 113, 114, 115. (SCC)

CARP 226 — Advanced Cabinet Finishing (3 cr)
This course provides a combination of lecture and advanced lab applications in the areas of staining, sealing and other finishing methods used on kitchen and bathroom cabinets. Prerequisite: CARP 126. (SCC)

CARP 243 — Plan Reading and Material Estimation (7 cr)
This course offers theory and practical applications in materials estimation for a building project. Interpretation of architectural drawings, plans and materials estimation from these drawings is emphasized. Prerequisite: CARP 133, 134, 135, 136 or permission of instructor. (SCC)

CARP 244 — Practical Framing Applications (9 cr)
This course offers practical applications in aspects of residential framing methods. Building layout procedures; floor, wall and roof framing methods are emphasized. Prerequisite: CARP 133, 134, 135, 136 or permission of instructor. (SCC)

CARP 251 — Introduction to Construction Trades (2 cr)
This course provides students with a broad overview of trades other than carpentry involved in a typical residential construction site. Topics include scheduling, basic concepts and terminology, and installation costs associated with each trade emphasizing, electrical, plumbing, and HVAC (heating, ventilation, air conditioning and refrigeration). (SCC)

CARP 253 — Exterior Estimating (7 cr)
This course offers practical applications in estimating that simulate on-the-job experience. Methods of calculating the quantity of materials needed for stairs, windows and doors, and insulating wall finishes are emphasized. Prerequisite: CARP 243, 244 or permission of instructor. (SCC)

CARP 254 — Exterior Application Methods (9 cr)
This course offers practical applications in exterior construction that simulate on-the-job experience. Exterior stair and wall treatments are emphasized. Prerequisite: CARP 243, 244 or permission of instructor. (SCC)

CARP 263 — Interior Estimating (7 cr)
This course offers practical applications in interior estimating that simulates on-the-job experience. Methods of calculating the quantity of materials needed for cabinetry, interior trim and finish work are emphasized. Prerequisite: CARP 253, 254 or permission of instructor. (SCC)

CARP 264 — Interior Application Methods (9 cr)
This course offers practical applications in residential construction emphasizing installation methods of interior trim and finish work. Cabinet construction and installation are covered in detail. Prerequisite: CARP 253, 254 or permission of instructor. (SCC)

CARP 267 — Cooperative Education Work Experience (1-18 cr)
For course description, see Cooperative Education. (SCC)

CARP 290 — Service Learning (1-2 cr)
This course is a teaching strategy combined with learning that integrates meaningful voluntary community service with instruction and reflection to enrich the learning experience, teach civic responsibility, and strengthen communities. Grading option: Pass/fail. (SCC)

CHEMICAL DEPENDENCY PROFESSIONAL STUDIES

HSSUB 131 — Survey of Chemical Dependency (3 cr)
Students are introduced to the many and varied drug-use behaviors that permeate our society, including psychosocial, physiological affects on personality, lifestyle and behavior. This is a foundational course for those who want to understand drugs and drug-use behavior. (SFCC)

HSSUB 141 — Law and Chemical Dependency Professionals (2 cr)
This course is designed for the student seeking information regarding legal issues in the field of chemical dependency counseling. Included are topics on the Washington Administrative Code (WAC) regarding completion of the necessary steps to become certified as a counselor, as well as current Driving Under the Influence of Intoxicants (DUI) laws. The course reviews the fundamental and technical aspects of laws and policies regarding alcohol and drug treatment, liability and malpractice. It also acquaints the students/professionals with their legal obligations to clients regarding confidentiality. (SFCC)

HSSUB 142 — Ethics in Chemical Dependency (2 cr)
This course is designed for the student seeking information regarding ethical issues in the field of chemical dependency counseling. Included are specific case studies to enable the student to distinguish between "ethics" and "laws", a comparison of ethical guidelines for counselors and social workers, development of an individual code of ethics and self-evaluation procedures, and development of professional skills that support ethical and effective practice as a member of the health care community, particularly regarding client-counselor relationships. (SFCC)

HSSUB 172 — Chemical Dependency in the Family (3 cr)
This course examines family systems in drug-free and drug-affected family disease and recovery. It examines how to facilitate change in those persons who are affected by the problems of an alcoholic or chemically dependent individual. Prerequisite: HSSUB 131 (SFCC)

HSSUB 176 — Chemical Dependency Counseling Techniques (5 cr)
This is an experiential course on techniques used in counseling. The student is exposed to basic counseling skills, strategies employed in chemical dependency treatment, counseling techniques used in addressing treatment needs and techniques used for removing blocks to recovery. Specific techniques are demonstrated and practiced that are appropriate for a variety of populations. Prerequisite: HSSUB 131 or permission of instructor. (SFCC)

HSSUB 179 — HIV/AIDS and Chemical Dependency (2 cr)
This course prepares chemical dependency professionals to respond to community, client and personal HIV-related needs that are effective and humane. Topics include risk assessment and intervention, legal and ethical issues, and vital information on other STDs and TB. (SFCC)

HSSUB 182 — Cultural Diversity in Addiction Counseling (2 cr)
This course provides the foundation information about multicultural perspectives as well as culturally sensitive counseling dynamics. (SFCC)

HSSUB 221 — Treatment Theories for Addictions (5 cr)
This course addresses the constructs, underlying principles, theories, practices and desired outcomes of the most generally accepted and scientifically supported models of treatment for addiction and other substance related problems. (SFCC)

HSSUB 275 — Physiological Actions of Alcohol and Drugs (5 cr)
This is a review of the pharmacology of psychoactive drugs. It is a research-based study of all categories of mind-altering substances. Prerequisite: HSSUB 131, 172. (SFCC)

HSSUB 277 — Group Process in Chemical Dependency Treatment (5 cr)
Designed to clarify the role and function of the chemical dependency counselor as a group facilitator. The student learns to use group therapy as an effective tool in working with people with alcohol/drug-related problems. Prerequisite: HSSUB 131 or permission of instructor. (SFCC)

HSSUB 279 — Case Management of Chemically Dependent Client (3 cr)
This course prepares students to function effectively as case managers. It includes detailed instruction in a systemized, uniform, problem-oriented recording system as well as methods and strategies employed in intervention, assessment, intake, treatment planning and case supervision in a variety of treatment settings. Prerequisite: HSSUB 131, 172. (SFCC)

HSSUB 280 — Advanced Case Management (3 cr)
This course allows addiction studies students the time necessary to become more proficient in the records management competencies. Prerequisite: HSSUB 279. (SFCC)

HSSUB 290 — Current Issues in Chemical Dependency (5 cr)
This is an advanced course for those completing or adding to new certification requirements. This is a multi-topic course addressing abnormal psychology and chemical dependency counseling, adolescent assessment in chemical dependency, and relapse prevention. Prerequisite: HSSUB 131, 275, 279. (SFCC)

CHEMISTRY

CHEM 101 — General Chemistry (5 cr)
A survey of basic principles of general chemistry including the metric system theory and structure, periodic table, bonding, moles, stoichiometry, gases and enthalpy changes. Intended for nonscience majors. Prerequisite: A working knowledge of basic algebra. (SCC)

CHEM 104 — Fundamental Concepts of Chemistry (1-2 cr)
This is a short course of variable 1 to 2 credits, designed to introduce fundamental chemistry concepts by engaging students in hands-on learning activities. It provides students with basic knowledge of chemistry as support for further studies and personal enrichment. Content of the learning activities include atomic structure, periodic table, chemical bonding, types of reactions such as acid/base and redox, physical states of matter, molecular structure, polarity, measurements, mole concept and stoichiometry. Fulfills up to 2 credits of the laboratory science requirement for the A.A. degree. (SCC)

CHEM& 110 — Chemical Concepts w/Lab (5 cr)
A survey course of basic concepts in chemistry with emphasis on the application of these topics in society. Topics covered may include philosophy and methods of science, arithmetic calculations, the metric system, unit conversions, atomic theory, chemical bonding, types of chemical reactions, gases, nuclear chemistry and current chemical issues such as ozone layer depletion, energy and society, acid rain, polymers, or foods and drugs among others. Recommended for non-science and liberal arts majors. Fulfills laboratory science requirement for AA degree. (SCC, SFCC)

CHEM 114 — Introduction to Chemistry-Online (5 cr)
Introduction to chemistry is a non-lab, entry-level chemistry class with a modest prerequisite of elementary algebra. This course is taught online via the Internet and is aimed at students who have no prior chemistry experience. Students gradually learn content and develop skills needed to succeed in a laboratory science and advance to the next level of chemistry curriculum. DOES NOT SATISFY ANY AA DEGREE REQUIREMENTS AND IS NOT TRANSFERRABLE. Prerequisite: Working knowledge of basic algebra. (SCC)

CHEM 115 — Environmental Chemistry w/Lab (5 cr)
This introductory course explores a wide range of topics for nonscience majors. Topics include ozone and SMOG chemistry, airborne particulates and acid rain, the greenhouse effect and ozone layer, structure and chemistry of freshwater bodies, environmental impact of metals and organic pollutants, water soil contaminants and their persistence of contaminants, and soil degradation and chemical assessment of contaminants soils. Soil and water remediation, and energy utilization and conservation are emphasized. Fulfills laboratory science requirements for AA degree. (SCC)

CHEM 120 — Organic and Biochemistry for the Health Sciences (5 cr)
This course covers selected topics in organic and biochemistry including organic functional groups; organic reactions; intermolecular forces; structure and function of carbohydrates; lipids and proteins; enzymes; common metabolic pathways; causes and effects of arteriosclerosis; classes of drugs; actions and metabolism of drugs; and interferences and side effects of drugs. Additional topics may include hormone action, membrane properties, molecular immunology, neurotransmitters, muscle contractions and blood clotting. Prerequisite: CHEM& 121 or one year of high school chemistry within the last five years with a 2.0 GPA or better and enrolled in the invasive or noninvasive cardiovascular technology program. (SCC)

CHEM& 121 — Intro to Chemistry: w/Lab (5 cr)
A survey of inorganic chemistry for nursing and allied health sciences. Includes atomic structure, bonding periodicity, stoichiometry, gases, equilibrium, solution chemistry and nuclear chemistry. Fulfills laboratory science requirement for AA degree. (SCC, SFCC)

CHEM& 122 — Intro to Organic Chem: w/Lab (5 cr)
A survey or organic chemistry including structure, function and chemistry of aliphatic and aromatic hydrocarbons, alcohols, ethers, carboxylic acids, amines and related compounds; mechanisms, and stereochemistry. Fulfills laboratory science requirement for AA degree. Prerequisite: CHEM& 121 or permission of instructor. (SCC, SFCC)

CHEM& 123 — Intro to Biochemistry: w/Lab (5 cr)
A brief survey of biochemical principles, including structures of biomolecules, enzymatic catalysis, thermodynamics, metabolic pathways, genetic expression and biotechnology. Fulfills laboratory science requirement for AA degree. Prerequisite: CHEM& 122 or permission of instructor. (SCC, SFCC)

CHEM& 140 — General Chem Prep with Lab (5 cr)
A survey course of basic topics in chemistry, which may include philosophy and methods of science, arithmetic calculations, the metric system, unit conversions, atomic theory, chemical bonding, types of reactions, stoichiometry, gases, solutions, acid-base chemistry, nuclear chemistry, kinetic molecular theory, equilibrium and redox. Recommended for students who plan to take CHEM& 161 but have not had High School chemistry or for students that want to fulfill laboratory science requirement for AA degree. (SCC, SFCC)

CHEM& 161 — General Chem: w/Lab I (5 cr)
This series offers rigorous instruction in general chemistry. Topics include measurements, atomic structure, ionic and molecular compounds, aqueous solutions and molarity, chemical reactions, stoichiometry, gases, quantum theory and electronic structure, periodicity, chemical bonding, molecular geometry, solid and liquid states, solutions, chemical kinetics, chemical equilibrium, acids and bases, solubility equilibriums, thermo chemistry and chemical thermodynamics, and electrochemistry. Other topics selected at the discretion of the instructor include nuclear chemistry, coordination chemistry, environmental chemistry, organic and biochemistry, modern materials, etc. Lab involves both qualitative and quantitative aspects of chemistry with necessary accuracy for such work. Note: the topics in this three-quarter sequence may be presented in various orders depending on the institution and the text used. Students are strongly encouraged to complete all three courses at the same institution to help ensure coverage of the full range of important topics in general chemistry. Prerequisite: Currently enrolled in or have taken: MATH& 141 or higher level math courses, or permission of instructor. Recommended: One year of high school chemistry with a 2.0 grade or better or CHEM& 110 or CHEM& 140. (SCC, SFCC)

CHEM& 162 — General Chem w/ Lab II (5 cr)
This series offers rigorous instruction in general chemistry. Topics include measurements, atomic structure, ionic and molecular compounds, aqueous solutions and molarity, chemical reactions, stoichiometry, gases, quantum theory and electronic structure, periodicity, chemical bonding, molecular geometry, solid and liquid states, solutions, chemical kinetics, chemical equilibrium, acids and bases, solubility equilibriums, thermo chemistry and chemical thermodynamics, and electrochemistry. Other topics selected at the discretion of the instructor include nuclear chemistry, coordination chemistry, environmental chemistry, organic and biochemistry, modern materials, etc. Lab involves both qualitative and quantitative aspects of chemistry with necessary accuracy for such work. Note: the topics in this three-quarter sequence may be presented in various orders depending on the institution and the text used. Students are strongly encouraged to complete all three courses at the same institution to help ensure coverage of the full range of important topics in general chemistry. Prerequisite: CHEM& 161 or permission of instructor. (SCC, SFCC)

CHEM& 163 — General Chem w/ Lab III (5 cr)
This series offers rigorous instruction in general chemistry. Topics include measurements, atomic structure, ionic and molecular compounds, aqueous solutions and molarity, chemical reactions, stoichiometry, gases, quantum theory and electronic structure, periodicity, chemical bonding, molecular geometry, solid and liquid states, solutions, chemical kinetics, chemical equilibrium, acids and bases, solubility equilibriums, thermo chemistry and chemical thermodynamics, and electrochemistry. Other topics selected at the discretion of the instructor include nuclear chemistry, coordination chemistry, environmental chemistry, organic and biochemistry, modern materials, etc. Lab involves both qualitative and quantitative aspects of chemistry with necessary accuracy for such work. Note: the topics in this three-quarter sequence may be presented in various orders depending on the institution and the text used. Students are strongly encouraged to complete all three courses at the same institution to help ensure coverage of the full range of important topics in general chemistry. Prerequisite: CHEM& 162 or permission of instructor. (SCC, SFCC)

CHEM& 241 — Organic Chem I (3 cr)
This course covers structure, bonding, molecular properties, an overview of organic reactions, and stereochemistry, with emphasis on the nomenclature, physical properties, chemical reactivity mechanisms and chemical reactions of the following organic families: alkanes, cycloalkanes, alkenes, alkynes and alkylhalides. Prerequisite: CHEM& 163 or equivalent and concurrent enrollment in CHEM& 241, CHEM& 251. (SCC, SFCC)

CHEM& 242 — Organic Chem II (3 cr)
This course is a continuation of CHEM& 241 in which the study of organic families continues with aromatic compounds (benzene), alcohols, thiols, ethers, epoxides, sulfides, aldehydes and ketones. Spectroscopy (IR, UV, NMR, MS) also are discussed. Prerequisite: CHEM& 241, CHEM& 251 and concurrent enrollment in CHEM& 252. (SCC, SFCC)

CHEM& 243 — Organic Chem III (3 cr)
This course is a continuation of CHEM& 242 and focuses on the properties and chemical reactivity, mechanisms, nomenclature and spectroscopy of the rest of the organic families which include carboxylic acids and derivatives (acid halides, acid anhydrides, esters, amides, and nitriles), carbonyl alpha-substitution reactions, carbonyl condensation reactions, aliphatic amines, arylamines and phenols. Optional subjects are biomolecules (carbohydrates, amino acids, proteins, lipids, heterocycles and nucleic acids). Prerequisite: CHEM& 242, CHEM& 252 and concurrent enrollment in CHEM& 253. (SCC, SFCC)

CHEM& 251 — Organic Chem Lab I (2 cr)
This course involves experiments that demonstrate the techniques used in organic synthesis, isolation and purification of organic compounds. These techniques include recrystallization, extraction, chromatographic techniques, distillation techniques, sublimation, melting point determination and reflux. Prerequisite: Concurrent enrollment in CHEM& 241. (SCC, SFCC)

CHEM& 252 — Organic Chem Lab II (2 cr)
This course uses experiments to support lecture in the mechanistic approach of chemical synthesis and instrumentation. Prerequisite: CHEM& 241, CHEM& 251 and concurrent enrollment in CHEM& 242. (SCC, SFCC)

CHEM& 253 — Organic Chem Lab III (2 cr)
This course supports the concepts and mechanisms discussed in CHEM& 243 with organic synthesis experiments. Prerequisite: CHEM& 242, CHEM& 252 and concurrent enrollment in CHEM& 243. (SCC, SFCC)

CHINESE

CHIN& 121 — Chinese I (5 cr)
Students are introduced to the Chinese language and the current use of simplified characters. Official Mandarin Chinese is used for beginners using Pinyin (Chinese sound system). This course maintains regional standards for competency and vocabulary. Language lab is required. (SCC, SFCC)

CHIN& 122 — Chinese II (5 cr)
Students continue with the concepts introduced in CHIN& 121 to learn the Chinese language and current use of simplified characters. Official Mandarin Chinese is used for beginners using Pinyin (Chinese sound system). This course maintains regional standards for competency and vocabulary. Language lab is required. Prerequisite: CHIN& 121 or permission of instructor. (SCC, SFCC)

CHIN& 123 — Chinese III (5 cr)
Students continue with the concepts introduced in CHIN& 122 to learn the Chinese language and current use of simplified characters. Official Mandarin Chinese is used for beginners using Pinyin (Chinese sound system). This course maintains regional standards for competency and vocabulary. Language lab is required. Prerequisite: CHIN& 122 or permission of instructor. (SCC, SFCC)

CHIN 141 — Chinese Conversation and Culture (5 cr)
This course offers an option for students who are interested in Chinese language and culture. Concepts presented include Taoism, contemporary issues, Chinese cuisine and cooking skills, survival speaking skills and other select topics. (SCC)

CHIN 224 — Modern China-Educational Tour (3-10 cr)
This course offers students a life-changing, direct cultural experience in China. Interaction with Chinese college students and using the Chinese language to build bridges of understanding between Chinese and American students are emphasized in this course. Prerequisite: CHIN& 121, 141 or permission of instructor. (SCC)

CHIN 241 — Chinese Conversation and Culture (5 cr)
This course gives students an opportunity to apply new language and cultural skills in group settings and interpersonal conversations. (SCC)

CIVIL ENGINEERING TECHNOLOGY

CET 111 — Technical Math (8 cr)
This course introduces theory and practical applications of math concepts emphasizing the fundamentals of algebra. Prerequisite: Concurrent enrollment in CET 112 and 113. (SCC)

CET 112 — Plan Reading (4 cr)
Students learn to read architectural and engineering plans. Practical applications in quantity take off are presented. Prerequisite: Concurrent enrollment in CET 111, 113. (SCC)

CET 113 — Drafting (4 cr)
Students use hand drafting instruments in pencil and ink techniques in a lab setting. Prerequisite: Concurrent enrollment CET 111, 112. (SCC)

CET 121 — Applied Technical Math (7 cr)
This course continues with the concepts introduced in CET 111 emphasizing geometry and trigonometry and their applications to surveying and civil engineering. Prerequisite: CET 111 and concurrent enrollment in CET 122, CET 123. (SCC)

CET 122 — Surveying Theory (5 cr)
Students are introduced to the practices and methods of surveying using instruments. The application of mathematical skills necessary for surveying is emphasized. Prerequisite: Concurrent enrollment in CET 121, CET 123. (SCC)

CET 123 — Introduction to Civil Computer Aided Design (6 cr)
This course introduces the principles of computer aided design and its application to the engineering profession. Prerequisite: CIS 105. (SCC)

CET 125 — Plan Reading (5 cr)
This course continues with the concepts introduced in CET 112. Architectural, bridge and highway plans are emphasized. An extensive examination of construction methods and terms is presented. Prerequisite: CET 112 or permission of instructor. (SCC)

CET 133 — Field Surveying (8 cr)
This course introduces practical applications in surveying methods emphasizing the use of surveying instruments and tools to complete level and traverse closures, circular curve layouts, and topographic surveying. Prerequisite: CET 121, 122, 123 and concurrent enrollment in CET 136, 161. (SCC)

CET 136 — Statics (6 cr)
This course introduces the effect of forces acting on rigid bodies emphasizing the development if the ability to use mathematics to solve practical problems encountered in all engineering disciplines. Prerequisite: CET 121 and concurrent enrollment in CET 133, 161. (SCC)

CET 161 — Land Surveying (5 cr)
Students study the practices and methods of land surveying in depth. State laws, requirements, statues and codes are examined. Prerequisite: Concurrent enrollment in CET 133, 136. (SCC)

CET 230 — Construction Process I (3 cr)
Students are introduced to the construction industry with discussion of the relationships between the owner, contractor and design professional. Prerequisite: CET 257 and concurrent enrollment in CET 256, 261. (SCC)

CET 232 — Construction Process II (2 cr)
This course continues with the concepts introduced in CET 230 with emphasis on project scheduling using the critical path method and computer software. Prerequisite: CET 230 and concurrent enrollment in CET 258, 264. (SCC)

CET 242 — Advanced Surveying (6 cr)
This course introduces advanced concepts in the theory and application of field and office practices required for route surveying and road design. Prerequisite: CET 123, 133 and concurrent enrollment in CET 243, 253. (SCC)

CET 243 — Advanced Civil Computer Aided Design (6 cr)
This course presents an extensive study and practical application of Land Development Desktop software. Prerequisite: CET 123 and concurrent enrollment in CET 242. (SCC)

CET 252 — Hydraulics I (6 cr)
This course is an introduction to the theory and practical application of water hydraulics and its relationship to the civil engineering profession. Areas of emphasis include fluid statics, buoyancy and general energy equation for pressure flow, and calculation of major and minor energy losses in pressure flow systems. Prerequisite: CET 253 and concurrent enrollment in CET 254, 257. (SCC)

CET 253 — Strength of Materials (5 cr)
This course is an introduction to the study of the relationship between external forces acting on elastic bodies and the internal stresses and strains generated by these forces. Practical applications include compression, shear and tension tests on wood and steel samples. Prerequisite: CET 136 and concurrent enrollment in CET 242, 243. (SCC)

CET 254 — Structures (5 cr)
Students study structural design of beams and columns in wood and steel with a review of building types. Lab applications such as bending tests on wood samples are included. Prerequisite: CET 253 and concurrent enrollment in CET 252, 257. (SCC)

CET 256 — Hydraulics II (3 cr)
This course continues with the concepts introduced in CET 252 with emphasis on the hydraulics of open channel flow and Manning's equation. Hydrology and storm water management topics are presented. Prerequisite: CET 252 and concurrent enrollment in CET 230, 261. (SCC)

CET 257 — Construction Materials I (6 cr)
Theory and practical application in the testing and use of construction materials including aggregates and soils is presented. Prerequisite: Concurrent enrollment in CET 252, 254. (SCC)

CET 258 — Construction Materials II (3 cr)
This course is a continuation of the theory and lab applications presented in CET 257 with emphasis on the use and testing of asphalt and masonry. Prerequisite: CET 257 and concurrent enrollment in CET 232, 264. (SCC)

CET 261 — Concrete (3 cr)
Students are introduced to the study of concrete as a construction material. Construction specifications and plan reading pertinent to the ICBO Special Inspector exam are presented. Prerequisite: CET 254, 257 and concurrent enrollment in CET 230, 256. (SCC)

CET 263 — Strength of Materials (5 cr)
This course continues with the concepts introduced in CET 253 with emphasis on the analysis and design of elementary wood and steel structural parts used as beams and columns. Prerequisite: CET 253 or permission of instructor. (SCC)

CET 264 — Design Project (3 cr)
This course offers a team design project for CET graduating students that includes all of the design and drawing necessary for a specified engineering or surveying project. Prerequisite: CET 243, 252, 254, 257 and concurrent enrollment in CET 232, 258. (SCC)

CET 265 — Special Problems (1-10 cr)
Faculty supervise this independent study on a subject agreed upon by the instructor and student. Students may write a technical paper, work out advanced engineering problems, or design and draft a survey or structural project. Prerequisite: Permission of instructor. (SCC)

CET 266 — Cooperative Education Seminar (1-2 cr)
For course description, see Cooperative Education. (SCC)

CET 267 — Cooperative Education Work Experience (1-18 cr)
For course description, see Cooperative Education. (SCC)

CET 288 — Cooperative Education Work Experience (No Seminar) (1-18 cr)
For course description, see Cooperative Education. (SCC)

COMMUNICATION STUDIES

CMST& 101 — Introduction to Communication (5 cr)
This course surveys the field of communication. It teaches students the theories and skills associated with effective interpersonal, small group, and public communication. Emphasis is on in-class activities and on improving the student's confidence in a variety of communication settings. Students receive at least 11 (eleven) hours of instruction in topical research, speech organization and support, and writing expository and persuasive prose for the purpose of oral delivery in an academic setting. Prerequisite: SFCC only: recommended minimum reading placement score: COMPASS 80, ASSET 40. (SCC, SFCC)

CMST 103 — Effective Listening (3 cr)
Most people assume they are effective listeners; however, according to listening expert Dr. Ralph Nichols, college students test at about 25 percent accuracy in their listening skills. This course is designed to help students assess their listening and learning styles and to develop those skills necessary for success in college and in the job market. (SCC)

CMST 104 — College Ambassadors (1-3 cr)
This unique course provides links for students from the U.S. and those who have English as a second language. Students work one-on-one with international students while learning about various cultures and building friendships. Students may not exceed 6 credits for the series. Prerequisite: CMST 227 or permission of instructor. (SCC)

CMST 105 — College Ambassadors (1-3 cr)
This unique course provides links for students from the U.S. and those who have English as a second language. Students work one-on-one with international students while learning about various cultures and building friendships. Students may not exceed 6 credits for the series. Prerequisite: CMST 227 or permission of instructor. (SCC)

CMST 106 — College Ambassadors (1-3 cr)
This unique course provides links for students from the U.S. and those who have English as a second language. Students work one-on-one with international students while learning about various cultures and building friendships. Students may not exceed 6 credits for the series. Prerequisite: CMST 227 or permission of instructor. (SCC)

CMST 111 — Voice and Articulation I (4 cr)
Students learn to speak and interact in small group settings. Class discussions on a variety of cultural, social and technical topics, and one-on-one assistance in pronunciation/articulation are emphasized. Presentational skills also are included. Prerequisite: Passing the SLEP test with a minimum score of 50 or permission of instructor. (SCC)

CMST 112 — Voice and Articulation II (4 cr)
ESL students continue the concepts learned in CMST 111 by speaking and interacting in small group settings. Class discussions on a variety of cultural, social and technical topics, and one-on-one assistance in pronunciation/articulation with a speech clinician are emphasized. Presentational skills also are included. prerequisite: CMST 111, passing the SLEP test with a minimum score of 50 or permission of instructor. (SCC)

CMST 113 — Voice and Articulation III (4 cr)
ESL students continue the concepts learned in CMST 111 by speaking and interacting in small group settings. Class discussions on a variety of cultural, social and technical topics, and one-on-one assistance in pronunciation/articulation with a speech clinician are emphasized. Presentational skills also are included. Prerequisite: CMST 112, passing the SLEP test with a minimum score of 50 or permission of instructor. (SCC)

CMST 114 — Oral Interpretation of Literature (5 cr)
Students in this course develop and implement the fundamental techniques of analysis of literature. Students also will develop and demonstrate their skills in presenting readings from works of prose, poetry and drama. (SFCC)

CMST 120 — Practical Communication for Technicians (3-5 cr)
This course will assist vocational/technical students in improving their listening skills, understanding the importance of a positive attitude and motivation, and increasing basic verbal and non-verbal communication skills. Recommended for first or second quarter students. (SCC)

CMST 121 — Job Communication Skills (2-5 cr)
This course is designed to meet the needs of specific professional/technical students with emphasis on attitudes, work ethics, resumes and job interviewing skills. (SCC, SFCC)

CMST 127 — Leadership Development (3-5 cr)
Emphasizes integrity and professionalism in the workplace, team-building problem-solving, presentational skills, and selling techniques for success on the job. Variable credits. (SCC)

CMST& 210 — Interpersonal Communication (5 cr)
This course provides an opportunity to learn and apply the theory of interpersonal communication. Learning experiences include work with personal growth, verbal and nonverbal communication skills, active listening, stress management, and resolving communication conflicts to develop healthy personal relationships. (SCC, SFCC)

CMST& 220 — Public Speaking (5 cr)
This course teaches students fundamental principles of researching, writing and delivering an effective public address. Students learn audience adaptation and receive at least 11 hours of instruction in the development and composition of formal preparation outlines for expository, persuasive and motivational speeches. Students study and practice a variety of rhetorical techniques suitable for crafting clear, memorable and persuasive prose. They gain confidence as speakers through the study and practice of a wide variety of proven delivery techniques and styles. Prerequisite: SFCC only: recommended minimum reading placement score: COMPASS 80, ASSET 40. (SCC, SFCC)

CMST 223 — Intercollegiate Speech and Debate (1-5 cr)
Students prepare for and participate in competitive intercollegiate speech and/or debate. Activities include preparing for debates, presentational speeches, oral interpretation of literature and extemporaneous speaking. May be repeated up to 15 credits. Prerequisite: SFCC only: Recommended minimum reading placement score: COMPASS 80, ASSET 40. (SCC, SFCC)

CMST 224 — Intercollegiate Speech and Debate (1-5 cr)
Students prepare for and participate in competitive intercollegiate speech and/or debate. Activities include preparing for debates, presentational speeches, oral interpretation of literature and extemporaneous speaking. May be repeated up to 15 credits. Prerequisite: SFCC only: Recommends minimum reading placement score: COMPASS 80, ASSET 40. (SCC, SFCC)

CMST 225 — Intercollegiate Speech and Debate (1-5 cr)
Students prepare for and participate in competitive intercollegiate speech and/or debate. Activities include preparing for debates, presentational speeches, oral interpretation of literature and extemporaneous speaking. May be repeated up to 15 credits. Prerequisite: SFCC only: Recommended minimum reading placement score: COMPASS 80, ASSET 40. (SCC, SFCC)

CMST 226 — Gender Communication (5 cr)
This course provides the opportunity to learn and apply theories of gender communication. Learning experiences include work with both verbal and nonverbal communications as they apply to perception, stereotyping, brain and other biological differences, gender and socialization, processing information, differences in communication style, gender communication in friendships, and gender communication in the workplace. (SCC, SFCC)

CMST 227 — Intercultural Communication (5 cr)
This course is a culture-general approach to intercultural communication. Emphasis is on experiential learning in order to understand and improve intercultural communication at both the domestic and international levels. Students have the opportunity to improve verbal and nonverbal communication skills with different cultures in the community, and to focus on international communication needs. Prerequisite: SFCC only: Recommends minimum reading placement score: COMPASS 80, ASSET 40. (SCC, SFCC)

CMST 229 — Argumentation and Debate (5 cr)
Argumentation & Debate teaches students the theory and practices associated with analyzing, constructing, and delivering arguments -- in writing and orally -- on topics of controversy. Students develop skills in case construction, using evidence in support of argument, responding to arguments and questions, and effective delivery of arguments to critical audiences. (SCC, SFCC)

CMST& 230 — Small Group Communication (5 cr)
Practical application of problem-solving skills, discussion techniques, task and social roles including leadership are explored. Focus will be on communication behavior in small task-oriented groups. Prerequisite: SFCC only: Recommended minimum reading placement score: COMPASS 80, ASSET 40. (SCC, SFCC)

CMST 250 — Managing Conflict Through Communication (5 cr)
Understanding conflict is a critical step in the process of managing it. This course emphasizes both theory and practical application to help students manage conflict by utilizing communication skills. Prerequisite: CMST& 210. (SCC)

CMST 266 — Cooperative Education Seminar (1-2 cr)
For course description, see Cooperative Education. (SCC)

CMST 267 — Cooperative Education Work Experience (1-18 cr)
For course description, see Cooperative Education. (SCC)

CMST 280 — Public Relations (5 cr)
An introduction to the basic principles of public relations. Areas of interest will include research, ethics and theory, media, and campaign strategy. Prerequisite: College level reading and writing skills. CMST& 101. (SCC)

CMST 287 — Business and Professional Communication (3-5 cr)
This course is designed to focus on how interaction skills affect the individual's and the organization's success. Students learn to maintain employment and to benefit the organization through effective communication skills with managers, co-workers and customers. Some topics covered include organizational communication theory and history, culture, working in teams, presenting at work, conflict management and listening skills. Prerequisite: Second-year student or permission of instructor. (SCC)

CMST 294 — Special Topics in Speech Communication (3-5 cr)
A communication course with content and scope varying from quarter to quarter according to designation and credits filed in advance of each quarter. (SCC, SFCC)

COMPUTER APPLICATION TECHNOLOGY TRAINING

CATT 102 — Introduction to Outlook (2.5 cr)
Using Outlook, students learn to communicate through e-mail, maintain electronic calendars, schedule meetings, use contacts, customize menus and taskbars, send/receive faxes, and import/export data among applications. (SCC)

CATT 120 — Microsoft Word I (1-2.5 cr)
Students learn and apply basic functions of Microsoft Word to create, print and edit documents such as letters, tables, memos, reports, labels and envelopes; format characters and paragraphs; insert section and page breaks; add bullets and numbers to lists; and use Word's writing tools. The skills required for the core level of the Microsoft Word MOUS (Microsoft Office User Specialist) certification examination are presented in CATT 120 and 121. (SCC)

CATT 121 — Microsoft Word II (1-2.5 cr)
This course is a continuation of CATT 120. Students learn and apply functions of Microsoft word to add headers, footers and page numbers to documents; create and modify column structure; use Wizard and templates to create new documents; create and modify tables by adding borders and changing table structure; enhance documents with pictures and charts; and manage files. (SCC)

CATT 122 — Microsoft Access I (1-3 cr)
This course presents theory and application in the basic concepts and terminology of relational database management. Students plan and design databases in addition to building and modifying tables and forms. The skills required for the Microsoft Access MOUS (Microsoft Office User Specialist) certification examination are presented in CATT 122 and 123. (SCC)

CATT 123 — Microsoft Access II (1-2.5 cr)
Students learn and apply functions of Microsoft Access to view and organize information, define relationships, produce reports and integrate with other applications. (SCC)

CATT 128 — Desktop Publishing (5 cr)
This introductory course is designed for students with little or no background in desktop publishing. Emphasis is placed on basic concepts and terminology common to popular desktop publishing software. Basic DOS functions used in desktop publishing are introduced. (SCC)

CATT 134 — Presentation Graphics (5 cr)
This course covers theory and practical applications in graphics applications software using such skills as shapes, text and charts. The proper use of clip-art, as well as the newest software that promotes video graphics is emphasized. Proofreading, editing, critical thinking and logic skills are utilized. Projects reflect the need in the local business community, so course materials are constantly revised with the latest ideas and technology. Prerequisite: CIS 110 and keyboarding skills. (SCC)

CATT 138 — Microsoft Excel I (1-2.5 cr)
This course presents the basic functions of Microsoft Excel required to create, modify, format and print spreadsheets. The skills required for the core level of the Microsoft Excel MOUS (Microsoft Office User Specialist) certification examination are presented in CATT 138 and 139. (SCC)

CATT 139 — Microsoft Excel II (2.5 cr)
This course is a continuation of CATT 138. Students learn to work with worksheets and workbooks, formulas and functions, and to use charts and objects. (SCC)

CATT 140 — Integrated Applications (5 cr)
This competency-based course is a capstone course for the computer user. Skills learned in previous courses are refined and incorporated into practical applications. Prerequisite: CIS 110, 205 and CATT 120, 121, 122, 134. (SCC)

CATT 190 — Introduction to PowerPoint (1-2.5 cr)
Students learn and apply the fundamentals of Microsoft PowerPoint to create and modify presentations; and use design templates, the Office Clipboard, Format Painter and Word Art in addition to the drawing tools. Skills required for the PowerPoint MOUS (Microsoft Office User Specialist) certification examination are presented. (SCC)

CATT 191 — Advanced PowerPoint (2.5 cr)
Students learn and apply advanced features of Microsoft PowerPoint to modify and create presentations by customizing the color schemes, adding charts and graphs, building and modifying organization charts importing Word and Excel documents, adding links to presentations, and adding animation. (SCC)

CATT 220 — Advanced Microsoft Word I (2.5 cr)
This course is a continuation of CATT 121. Students learn and apply advanced functions of Microsoft Word to create and edit document styles, work with master documents and subdocuments, create and modify a table of contents or index, use tables with embedded worksheets, sort lists, and create and revise footnotes and endnotes. (SCC)

CATT 221 — Advanced Microsoft Word II (2.5 cr)
This is the final course in a series covering Microsoft Word and is a continuation of CATT 220. Students learn and apply advanced functions of Microsoft Word to sort and create merged documents such as letters, envelopes and labels; to create, apply, copy, rename and edit macros; to create and modify forms; and to collaborate with work groups through comments, multiple versions and tracking of documents. (SCC)

CATT 222 — Advanced Microsoft Access I (2.5 cr)
This course presents advanced Microsoft Access functions including building, modifying tables and forms, and refining queries. (SCC)

CATT 223 — Advanced Microsoft Access II (2.5 cr)
This course is a continuation of CATT 222 and presents advanced Microsoft Access functions with an emphasis on utilizing web capabilities, producing reports, using Access tools and integrating data. (SCC)

CATT 238 — Advanced Microsoft Excel I (2.5 cr)
This course covers advanced concepts for using Microsoft Excel. Students use templates and multiple workbooks; work with toolbars; and record, run and edit macros. (SCC)

CATT 239 — Advanced Microsoft Excel II (2.5 cr)
This course is a continuation of CATT 238. Students record, run and edit macros; extract data and apply data filters; use analysis tools; and learn how to collaborate in workgroups. (SCC)

CATT 241 — Microsoft Project (2.5 cr)
Students develop skills using computer software to plan, execute, control and close a project in order to meet the project's goal. Students use MS Project as a central database to organize all project information. This course focuses on determining tasks and resources, creating project schedules, using Gantt charts and network diagrams to monitor projects, and generating project reports. Prerequisite: CIS 110 or equivalent experience is recommended. (SCC)

CATT 242 — Advanced Microsoft Project (2.5 cr)
Using MS Project, students will continue to develop and enhance the skills they learned in CATT 241. Students will use MS Project to track progress, develop reports, integrate Project information with other MS office software, create and use templates and use a master project. In addition, a major emphasis of this class is on the practical application of MS Project through the use of case studies or projects chosen by the students. Prerequisite: Previous or concurrent enrollment in CATT 241 is required. (SCC)

COMPUTER INFORMATION SYSTEMS

CIS 105 — Computer Fundamentals for Vocations I (1-5 cr)
This course introduces students to basic computer concepts and practical application of relevant application software. Course content may vary depending on individual vocational programs needs. (SCC)

CIS 110 — Introduction to Computer Applications (5 cr)
The basic principles of computers and business application software including word processing, spreadsheets and database software are introduced in this course. The in-depth study of basic commands and concepts, and the applications of a variety of commercial software are emphasized. (SCC)

CIS 111 — XHTML Basics (5 cr)
This course introduces basic concepts of the Extensible HyperText Markup Language (XHTML) and Cascading Style Sheets (CSS). Students learn the technology required to develop and maintain static web sites. (SCC)

CIS 112 — Web Graphics with Photoshop (5 cr)
This course provides an in-depth exploration of how to plan, design and execute visually appropriate images using Adobe Photoshop. Masks, text, effects, and general photo composition are utilized to create posters, 3-d images, and images which can eventually be utilized in website design and construction. (SCC)

CIS 114 — JavaScript (5 cr)
This course teaches the fundamentals of the JavaScript language and how to create interactive web pages through client-side scripting. Students learn how to manipulate the DOM and BOM to create more sophisticated web sites. The skills taught in this class prepare students to use advanced libraries like JQuery. Prerequisite: CIS 130 and (282 or 256) each with a passing grade of 2.0 or better or permission of instructor. (SCC)

CIS 126 — DBMS/SQL (5 cr)
This course introduces ANSI SQL. Students learn the uses of SQL scripting as it pertains to common database management systems such as MySQL, Oracle, SQL Server or DB2. Students acquire the ability to create, modify and delete data and data structures. Students also learn to implement SQL using web technologies. Prerequisite: CIS 146 with a passing grade of 2.0 or better or permission of instructor. (SCC)

CIS 127 — SQL Server and Transact-SQL (5 cr)
Students learn to design and implement a SQL Server database. Once the relational database is developed, students program web applications using stored procedures created with Transact-SQL. Prerequisite: CIS 126 or permission of instructor. (SCC)

CIS 130 — Website Design (5 cr)
Students are introduced to the techniques, processes and terminologies for designing a static web site from the first concept to the finished web site. Planning aspects and basic elements necessary to publish a successful site are emphasized. Cascading Style Sheets (CSS) are heavily emphasized. Prerequisite: CIS 111 with a passing grade of 2.0 or better; CIS 112 recommended; or permission of instructor. (SCC)

CIS 135 — Network Emerging Technologies (1-5 cr)
Students are provided a variety of pertinent, current networking emerging technology topics. Course content varies depending upon the number of credits and topics chosen. (SCC)

CIS 138 — Home Networking (2.5 cr)
This course introduces the basic terminology, concepts and architecture of computer home networking. (SCC)

CIS 139 — Small Office Home Office Computer Basics (2.5 cr)
This course prepares students for basic set-up, maintenance, and troubleshooting of Small Office/Home Office computers and associated devices. (SCC)

CIS 146 — Introduction to Programming/VB (5 cr)
Students will explore basic programming concepts using Microsoft Visual Basic. Concepts include object-oriented principles and implementation, structured programming principles (data types, variables, loops, selection structures) and debugging techniques are utilized by students to solve beginning-level computer application problems. The understanding and mastery of the terms, concepts, and theories of today's information technology programmers/analysts are the main objectives of this course. (SCC)

CIS 147 — Emerging Technologies 1 (1-5 cr)
Students research and evaluate emerging technologies. In addition, students make presentations about the features and uses of web technology to both the class and the entire software development program. This class hones writing, development and presentation skills both as an individual and in team settings. Course content varies depending upon the number of credits and topics chosen. Prerequisite: CIS 146 with a passing grade of 2.0 or better or permission of instructor. (SCC)

CIS 148 — Emerging Technologies 2 (1-5 cr)
Students research and evaluate emerging technologies and make presentations about the features and uses of web technology to both the class and the entire software development program. This class hones writing, development and presentation skills both as an individual and in team settings. Course content varies depending upon the number of credits and topics chosen. Prerequisite: CIS 146 with a passing grade of 2.0 or better or permission of instructor. (SCC)

CIS 149 — Networking for Developers (5 cr)
This course presents computer networking principles specific to the needs of the software developer. Students learn standard networking terms, protocols, and tools for a general overview of networking from the development perspective. Content will include, but is not limited to, the following: Web Protocols such as FTP, NNTP, HTTP, HTTPS, SSH, POP3, SMTP, and Telnet; Web application and site deployment techniques, remote monitoring and review of web access and error log files, simple debugging of networking problems, and wireless home security and port forwarding. Prerequisite: CIS 146 and CIS 130 with a passing grade of 2.0 or better or permission of instructor. (SCC)

CIS 154 — Beginning Flash Development (5 cr)
This course introduces students to the methods and techniques used in the development of multimedia materials and presentations using Adobe Flash. Specific emphasis is placed on creating graphic elements as a means of visual communication. Focus is placed on conceptualization and sequencing, analysis of animated graphics, the technology of computer-aided animation, application of visual theory, and organization to principles of animation. Prerequisite: CIS 112 with a passing grade of 2.0 or better or permission of instructor. (SCC)

CIS 201 — PC Hardware-A+ (5 cr)
This course covers objectives for A+ Certification by introducing basic to advanced concepts in hardware, software, and troubleshooting. Resource sharing, security, wireless, portable devices, and safety are also covered. (SCC)

CIS 205 — Windows Client OS (5 cr)
Students learn skills to install, configure and upgrade, diagnose and repair systems. Major features of the Windows operating system and its components, troubleshooting techniques and maintaining systems are emphasized. (SCC)

CIS 206 — Introduction to Linux/Unix (5 cr)
This course introduces the LINUX/UNIX operating system. Students learn to configure the latest version and set up the graphical interface with the X Window System. Many tips and techniques for specific uses of LINUX/UNIX, such as installing and configuring applications are presented. (SCC)

CIS 213 — Advanced Linux/Unix (5 cr)
Students with experience in LINUX/UNIX servers use skills to administer LINUX/UNIX systems in a network environment. They maintain LINX/UNIX systems, configure and troubleshoot the Network File System (NFS), and configure a Network Information Service (NIS) environment. Prerequisite: CIS 206, 250. (SCC)

CIS 214 — Beginning Network Security (5 cr)
Students address current issues concerning network security. Topics include introduction to the essentials of network security, why it is necessary, introduction to hacking on a network, security measures to defeat crackers, response to attacks and how to use information gained from an attack. (SCC)

CIS 216 — Advanced Network Security (5 cr)
This course introduces students to the vulnerabilities of a network through hacking. Hacking of major operating systems such as Microsoft, Novell, Linux and Unix are emphasized in addition to the hacking of network components and services. Different ways and types of attacks that are used by hackers are presented. Prerequisite: CIS 214. (SCC)

CIS 220 — Securing the Operating System (5 cr)
Students discover the possible vulnerabilities of the network and major operating systems. Methods of locating and repairing damages that occur are emphasized. Prerequisite: CIS 216. (SCC)

CIS 230 — PHP Programming (5 cr)
Students learn to create powerful, interactive, database-driven web sites. How PHP scripting language interacts with forms is discussed. Students also learn to generate dynamic pages, and data representation is introduced using MySQL database tables. Prerequisite: CIS 126, 114 with a passing grade of 2.0 or better or permission of instructor. (SCC)

CIS 234 — Network Scripting (3 cr)
Students write scripts utilizing Microsoft Visual Basic Scripting Edition (VBScript), Windows Script Host (WSH) and UNIX/LINUX shell scripting languages to manage Windows and Unix/LINUX based systems. Prerequisite: CIS 206, 244. (SCC)

CIS 236 — Windows Server Networking (5 cr)
This course explores Windows Server Networking and covers topics for Microsoft certification exams. The course focuses on configuring, managing, and troubleshooting networking features and services in a Windows Server environment. Prerequisite: CIS 244. (SCC)

CIS 239 — Software Project Management (2.5 cr)
Examines project management theory and practices from a managerial perspective. Students define a software project, create project objectives, determine resource requirements and create a project plan and schedule. Students will implement the concepts, tools and skills developed in this course while they successfully complete a software project. Prerequisite: CIS 146, 130, ENGL& 101 with a passing grade of 2.0 or better, or permission of instructor. (SCC)

CIS 240 — Introduction to Networks (5 cr)
This course introduces the basic terminology, concepts and architecture of computer networking. History, standards, componentry, topologies, benefits, Local Area Networks (LAN), and national and international networks are explained and studied in depth. (SCC)

CIS 244 — Windows Server (5 cr)
This course introduces managing, maintaining and troubleshooting devices, users, groups, computers, resource access in a Windows Server environment. Prerequisite: CIS 205. (SCC)

CIS 247 — Systems Management (5 cr)
The course gives students hands-on experience maintaining a network using system management software. Students learn to install and configure software; distribute applications on the network; set up policies for workstations and users; control and repair remote workstations; troubleshoot desktops, applications and policies; and maintain a network through a single point of administration. Prerequisite: CIS 244. (SCC)

CIS 250 — Cisco Network Fundamentals (5 cr)
This course introduces the architecture, structure, functions, components, and models of the Internet and other computer networks. Topics include network terminology, media, protocols, equipment, OSI and TCP models, basic router and switch configuration, Ethernet concepts and IP addressing. (SCC)

CIS 251 — Cisco Routing (5 cr)
Students are provided with hands-on experience required to set up wide area network and local area network routers. Topics include static routing, dynamic routing protocols, VLSM and CIDR, physical and logical topologies, network cabling, router commands, and network troubleshooting. Prerequisite: CIS 250. (SCC)

CIS 252 — Cisco Switching (5 cr)
Students learn to design, document, configure, implement, and troubleshoot switched basic Local Area Networks and Wireless Local Area networks using high-speed switching equipment. Virtual LANs, Virtual Trunking Protocol, and Spanning Tree Protocol are addressed in-depth. Prerequisite: CIS 250. (SCC)

CIS 253 — Cisco WAN Technologies (5 cr)
Students learn to design, implement and troubleshoot Wide-Area Networks using common data link protocols in enterprise networks. Topics include WAN network services, security concepts, access control lists, and network addressing. Troubleshooting and problem solving are addressed in depth. Prerequisite: CIS 251, 252. (SCC)

CIS 254 — Advanced Flash Development (5 cr)
Students examine major aspects of New Media production. Topics include New Media and interactivity, emerging technologies and digital delivery systems, New Media authoring, 2D and 3D graphics, digital audio and nonlinear digital video editing. The course also emphasizes the use of ActionScript programming to enable advanced interactivity functions in Flash. Prerequisite: CIS 154 or permission of instructor. (SCC)

CIS 256 — C# (5 cr)
Students use the object-oriented, event-driven .NET platform to learn programming concepts in this course. Students plan and create interactive Windows applications. Students also learn to write selection and repetition statements as well as create and manipulate sequential access files, random access files and arrays. Graphical User Interface (GUI) design skills are emphasized throughout this course. Prerequisite: CIS 146 with a passing grade of 2.0 or better or permission of instructor. (SCC)

CIS 257 — Advanced Visual Basic (5 cr)
Students learn to build scaleable applications using distributed COM objects in Visual Basic. Students learn n-tier architecture, object-oriented programming and the development of database driven applications using the ActiveX Data Objects, while covering the advanced features of the Visual Basic programming language. Prerequisite: CIS 256. (SCC)

CIS 258 — ASP.NET (5 cr)
Students learn to create web-based applications using n-tier architecture to distribute their presentation services, business logic and data services. Students also learn .NET methodologies including state, database driven websites and basic security using C#. Prerequisite: CIS 126, 256 each with a passing grade of 2.0 or better or permission of instructor. (SCC)

CIS 259 — Advanced ASP.NET/AJAX (5 cr)
This course introduces students to advanced website design topics including AJAX, ADO.Net, website security and web services. Upon completion of this course, students should have a solid foundation in ASP.net essentials to research and design most dynamic websites including informational and e-commerce driven sites. Prerequisite: CIS 114, 258 with a passing grade of 2.0 or better or permission of instructor. (SCC)

CIS 263 — Exchange Server Administration (5 cr)
Using Exchange Server, this course encompasses recipient objects, architecture, configuration, public folders, monitor tools, form administration and client deployment. Prerequisite: CIS 236. (SCC)

CIS 270 — Principles of Network Security (5 cr)
This course is an introduction to network security. Topics covered relate to general network security, common network attacks and how to safeguard against them, authentication methods, e-mail, directory and file transfers. Prerequisite: CIS 251. (SCC)

CIS 271 — Server and Introduction to Wireless Technologies (5 cr)
This course introduces students to advanced-level technical competency of server and introductory wireless issues including planning, installation, configuration, upgrading, maintenance, troubleshooting and disaster recovery. Prerequisite: CIS 205. (SCC)

CIS 272 — Agile Software Development (5 cr)
Students will learn about iterative and incremental development techniques found in agile programming methodologies. Students will have hands on experience working in teams and using tools to do source code versioning, testing, refactoring, and continuous integration. Prerequisite: CIS 258, 284 with a passing grade of 2.0 or better or permission of instructor. (SCC)

CIS 275 — Networking Capstone (5 cr)
This course is a culmination of the network engineering program in which student's research and evaluate emerging technologies and utilize the knowledge gained through the program. Students complete a research paper on technologies currently used in the networking field. Students also set up a network using current and legacy operating systems/hardware. Prerequisite: Permission of instructor only. (SCC)

CIS 276 — Software Development Capstone (5 cr)
Students apply the concepts of structured and object-oriented development to a team project-oriented environment to produce working software. Students choose the appropriate development platform for implementation. Students will work with non-profit organizations, businesses, or college departments in an effort to serve the community. Prerequisite: Permission of instructor. (SCC)

CIS 282 — Programming I - Ruby (5 cr)
Students learn programming fundamentals using the RUBY platform. Students implement Ruby with programming concepts using object-oriented terminology. Prerequisite: CIS 146 with a passing grade of 2.0 or better or permission of instructor. (SCC)

CIS 283 — Programming II - Ruby (5 cr)
This course is an extension of CIS 282 and introduces the power of object-oriented programming. Students are challenged to solve problems in an object-oriented fashion. Students learn to extend a class, inheritance and use exceptions, streams and files. Prerequisite: CIS 126, 282 with a passing grade of 2.0 or better or permission of instructor. (SCC)

CIS 284 — Ruby on Rails (5 cr)
Students use the Ruby language and Rails web framework to create scalable and robust web applications. Students learn to develop server-side applications to interface with web pages, making web sites more dynamic and powerful using database driven technologies. Web 2.0 ideas are implemented using AJAX technologies. Prerequisite: CIS 283 with a passing grade of 2.0 or better or permission of instructor. (SCC)

CIS 286 — Voice Over IP (5 cr)
Students acquire an understanding of PSTN basic components and key technologies behind VOIP including speech coding, packet transport and VOIP signaling protocols. Prerequisite: CIS 252. (SCC)

CIS 287 — Cisco CCNA Security (5 cr)
This course provides an introduction to the core security concepts and skills needed for the installation, troubleshooting, and monitoring of network devices to maintain the integrity, confidentiality, and availability of the network. Course objectives map to the Cisco CCNA Security industry certification. Prerequisite: CIS 253 or CCNA Certification. (SCC)

CIS 288 — Cooperative Education Work Experience (No Seminar) (1-18 cr)
For course description, see Cooperative Education. (SCC)

COMPUTING-COMPUTER APPLICATIONS

CAPPS 100 — Beginning Computer Skills (2 cr)
For new computer users. A beginning class with a focus on computer terminology and skills. Topics include Windows, Internet, beginning email, and beginning office software applications. (SFCC)

CAPPS 102 — Introduction to Office (1 cr)
This beginning course is designed for students with no previous computer experience. Students learn the basics of Word, Excel, Access, and PowerPoint software. Students apply learning to various business activities and personal applications. (SFCC)

CAPPS 104 — Beginning Windows Operating System (1 cr)
This beginning course introduces students to the latest Microsoft PC Operating System. Students learn how to customize, navigate, manage files and folders, and browse the Internet. Students also learn various control features and settings on the computer. (SFCC)

CAPPS 110 — Word (1-8 cr)
Students may learn beginning, intermediate, and/or advanced concepts and skills using Microsoft Word depending on number of credits. Students apply classroom learning to a variety of activities and scenarios based on real-world business applications. (Repeatable up to 8 credits.) Prerequisite: Minimum Reading Compass Score of 80 OR Reading Asset Score of 40. (SFCC)

CAPPS 112 — Excel (1-8 cr)
Students may learn beginning, intermediate, and/or advanced concepts and skills using Microsoft Excel depending on number of credits. Students apply classroom learning to a variety of activities and scenarios based on real-world business applications. (Repeatable up to 8 credits). Prerequisite: Minimum Reading Compass Score of 80 OR Reading Asset Score of 40. (SFCC)

CAPPS 114 — Access (1-8 cr)
Students may learn beginning, intermediate, and/or advanced concepts and skills using Microsoft Access depending on number of credits. Students apply classroom learning to a variety of activities and scenarios based on real-world business applications. (Repeatable up to 8 credits). Prerequisite: Minimum Reading Compass Score of 80 OR Reading Asset Score of 40. (SFCC)

CAPPS 116 — PowerPoint (1-5 cr)
Students may learn beginning, intermediate, and/or advanced concepts and skills using Microsoft PowerPoint depending on number of credits. Students apply classroom learning to a variety of activities and scenarios based on real-world business applications. (Repeatable up to 5 credits). Prerequisite: Minimum Reading Compass Score of 80 OR Reading Asset Score of 40. (SFCC)

CAPPS 120 — Outlook (2 cr)
The purpose of this course is to introduce students to the tools needed to send and receive e-mail, organize schedules, maintain contact lists and notes. Students also may learn other tools to manage messaging and business information. (SFCC)

CAPPS 130 — Introduction to Web Publishing (1 cr)
This course introduces the student to the use of HTML in creating basic web pages. It is the foundation for continuing studies in web development. Prerequisite: CS 101 or IS 120. (SFCC)

CAPPS 132 — Frontpage (1 cr)
This self-paced course introduces the student to the use of Frontpage in creating and managing web sites. The course includes features of Frontpage which allow for the development of interactive pages. Prerequisite: CS 101 or IS 120 or permission of instructor. (SFCC)

CAPPS 141 — Word I (2 cr)
Microsoft Word at an introductory level. Students will learn how to navigate, create, edit, format, and save documents. Students will also be able to use headers and footers, lists, pictures, clip art, and tables to enhance documents. Prerequisite: Minimum Reading Compass Score of 80 OR Reading Asset Score of 40. (SFCC)

CAPPS 142 — Word II (2 cr)
Microsoft Word at an intermediate level. Students will learn how to create and use styles, WordArt, drawing tools, outlines, charts, web pages, and track changes. Prerequisite: CAPPS 141. (SFCC)

CAPPS 151 — Excel I (2 cr)
Microsoft Excel at an introductory level. Students will learn how to navigate worksheets and workbooks, use formulas and functions, format worksheets and cells. Prerequisite: Minimum Reading Compass Score of 80 OR Reading Asset Score of 40 and SFCC math placement test of Math 93 or completion of BUS 102. (SFCC)

CAPPS 152 — Excel II (2 cr)
Microsoft Excel at an intermediate level. Students will learn how to use IF functions, create charts and tables, sort and filter data, and use graphic elements. Prerequisite: CAPPS 151. (SFCC)

CAPPS 161 — Access I (2 cr)
Microsoft Access at an introductory level. Students will learn how to create and work with tables, sort and filter records, create and use queries. Prerequisite: Minimum Reading Compass Score of 80 OR Reading Asset Score of 40 and SFCC math placement test score of Math 93 or completion of BUS 102. (SFCC)

CAPPS 162 — Access II (2 cr)
Microsoft Access at an intermediate level. Students will learn how to create and modify forms, reports, table relationships, and queries. Prerequisite: CAPPS 161. (SFCC)

CAPPS 171 — PowerPoint I (2 cr)
PowerPoint at an introductory level. Students will create and edit presentations. Students will be able to format slide elements, insert and and apply slide transitions, use themes, clip art, and speaker notes. Prerequisite: Minimum Reading Compass Score of 80 OR Reading Asset Score of 40. (SFCC)

CAPPS 172 — PowerPoint II (2 cr)
PowerPoint at an intermediate level. Students will be able to enhance a presentation with graphic elements, insert sound, and create photo albums. Students will also be able to apply and modify slide transitions and animation effects, use charts and graphics in presentations. Prerequisite: CAPPS 171. (SFCC)

CAPPS 180 — Outlook (2 cr)
The purpose of this course is to introduce students to the tools needed to send and receive e-mail, organize schedules, maintain contact lists and notes. Students also may learn other tools to manage messaging and business information. Prerequisite: CAPPS 141 or BT 101 or permission of instructor. (SFCC)

CAPPS 222 — Software Update (1-4 cr)
This course is for intermediate to advanced users of Word, Excel, Access, and PowerPoint. Students will learn the most up-to-date features and commonly used tools of the application software and be able to apply new methods to a variety of problem solving activities. (Repeatable up to 4 credits.) Prerequisite: Permission of instructor. (SFCC)

CAPPS 241 — Word III (2 cr)
Microsoft Word at an advanced level. Students will learn advanced table features, mail merging, and forms. Prerequisite: CAPPS 142. (SFCC)

CAPPS 242 — Word IV (2 cr)
Microsoft Word at an advanced level. Students will learn to work with multi-page documents creating and managing master documents, indexes, and contents pages. Students will also be able to create and use macros and integrate Word with other applications. Prerequisite: CAPPS 241. (SFCC)

CAPPS 251 — Excel III (2 cr)
Microsoft Excel at an advanced level. Students will learn how to create and use named ranges, templates, 3D references. Students will also learn how to use database features and functions and use statistical and logical functions. Prerequisite: CAPPS 152. (SFCC)

CAPPS 252 — Excel IV (2 cr)
Microsoft Excel at an advanced level. Students will learn how to create macros, templates, and forms. Students will also learn nesting functions, data tables, scenarios, and solver. Prerequisite: CAPPS 251. (SFCC)

CAPPS 261 — Access III (2 cr)
Microsoft Access at an advanced level. Students will learn how to create and format forms, create efficient reports, and automate forms. Students will also learn how to integrate Access with other applications. Prerequisite: CAPPS 162. (SFCC)

CAPPS 262 — Access IV (2 cr)
Microsoft Access at an advanced level. Students will learn macros, PivotTables from queries, database backup and security procedures. Prerequisite: CAPPS 261. (SFCC)

CAPPS 271 — PowerPoint III (2 cr)
PowerPoint at an advanced level. Students will create and publish custom presentations. Students will learn to integrate PowerPoint with other applications and prepare a culminating project. Prerequisite: CAPPS 172. (SFCC)

COMPUTING-COMPUTER SCIENCE

CS 101 — Computer Literacy (5 cr)
This is an introductory course in computer technology, concepts, operations and applications. Computer terminology is emphasized. It examines the complete system, including hardware, software, data, people and procedures. Students have extensive laboratory exercises in computer operating systems such as exposure to UNIX, DOS and Macintosh; various word processors, spreadsheets, databases and graphics. An exposure to the programming process is provided. Internet and general networking principles are included. Prerequisite: MATH 091, approval of instructor or test placement in MATH 099. (SFCC)

CS 121 — UNIX/Linux (3 cr)
This course is designed for students with some prior computing experience, especially with some operating system experience. The UNIX/Linux operating system will be installed and explored. Students learn how to navigate and administer Linux / Unix from both the command line and through a graphical user interface. Additional topics include software installation, using Linux applications, security and servers. Prerequisite: Knowledge of another operating system: DOS, VMS, etc. (SFCC)

CS& 141 — Computer Science I Java (5 cr)
This course is an introduction to the concepts and practices of information representation, computer algorithms, hardware fundamentals, and computer program design and implementation. This course allows students to write, compile, debug, run, analyze and evaluate computer programs written in a current object-oriented language. Prerequisite: MATH& 141 (can be concurrent) or permission of instructor. (SFCC)

CS 142 — Introduction to Computer Science II (5 cr)
This course continues where Introduction to Computer Science I left off, introducing the student to concepts and practices of information representation, computer algorithms, hardware fundamentals, and computer program design and implementation. This course introduces data structures and algorithms basic to the study of computer science, and object-oriented design and implementation. CS& 141 or permission of instructor. (SFCC)

CS 211 — C for Programmers (5 cr)
This course is designed to cover the syntax of the "C" programming language in the context of structured programming and with the Linux Operating System. It is intended for students with prior experience in computer programming. This course allows students to apply the "C" language and structured programming concepts to a series of programming problems concerning Makefiles, Graphics API's, System API's, Libraries, and Optimization Tools. Prerequisite: CS& 141 or permission of instructor. (SFCC)

CS 223 — Programming for IT (5 cr)
This course focuses on fundamental principles of programming and scripting, and presenting unique visual and object-oriented features. The course allows students to become proficient in scripting and programming, and the principles of good program design. Students write and demonstrate simple structured programs, but with well-developed user interfaces. Programming assignments include procedural techniques and event-driven processing. Prerequisite: IS 144, 210. (SFCC)

CS 253 — Object-Oriented Programming with C++ (5 cr)
This course is designed to cover the main topics of the "C++" programming language and object-oriented programming. It is intended for students with prior experience in computer programming, in general, and the "C" language in particular. This course allows students to apply the "C++" language and object-oriented concepts to a series of programming problems. Prerequisite: CS 142 and CS 211 or permission of instructor. (SFCC)

CS 255 — C for Engineers (5 cr)
This course introduces structured computer programming and problem solving, specifically for pre-engineering students, using the C language. Problem examples emphasize numerical solutions common to engineering. Emphasis is placed on programming principles, programming techniques and the process of solving problems using computers. Prerequisite: MATH& 141 (Can be concurrent). (SFCC)

CS 280 — Data Structures (5 cr)
This course explores data types, abstract data types, and data structures. Efficiency of algorithms is discussed extensively. Sequential and linked lists will be implemented. Students will be able to create, represent, and traverse binary trees. Searching is extensively covered, including dictionaries, priority queues, and hashing. Directed graphs and depth-first algorithms will be introduced. Additional topics include: garbage collection, dynamic storage allocation and sorting. Prerequisite: CS 142. (SFCC)

COMPUTING-INFORMATION SYSTEMS

IS 101 — Planning For Information Technology Students (1 cr)
Three main objectives comprise this course. First, inform students of options, outcomes and consequences of information technology education and training programs. Second, lead students in determining their education/training objectives and developing goals. Finally, prepare specific plans for subsequent education/training. Although concentration on information technology programs at SFCC, other programs are evaluated to determine which are most effective for each student. Students participate in group projects, documenting their research in written and oral reports. Upon completion of the course, students possess a detailed training/education plan. (SFCC)

IS 103 — Information Technology Fundamentals (5 cr)
Students learn computing hardware, operating systems and software applications. They learn to perform daily computer operations, including setting up a computer and installing new software. Skills are developed to evaluate and select business computer software and hardware and discuss and compare common operating systems. Hardware management and network terminology are introduced and selected operating systems are available for the students to experience. Prerequisite: IS 120 or permission of instructor. (SFCC)

IS 105 — Applications for IT I (3 cr)
This course has three objectives. First, inform students about information technology-related applications available and currently used in the industry. Second, teach the use of these applications through projects based creation and completion. Although concentrating on information technology programs, students are assisted in evaluating other applications to determine which are most effective. Students participate in group projects, documenting their research in written and oral reports. Upon completion of the course, students possess detailed, practical experience with some information technology standard applications. (SFCC)

IS 107 — Applications for IT II (3 cr)
Students build on the skills obtained in IS 105. They expand their knowledge on applications, including word processing, spreadsheets, databases design and management, collaboration applications, and other information technology related applications. Prerequisite: IS 105 or permission of instructor. (SFCC)

IS 120 — Business Computer Use (3 cr)
This is an introductory course for those unfamiliar with computers. The course provides an overview of common software applications. The topics include computer operation, computer terminology, word processing, electronic spreadsheets, graphics, database management and telecommunications. (SFCC)

IS 132 — Computer Ethics & Law (5 cr)
This class will address basic cyberspace legal issues and policy problems. Specific problems in applying law to cyberspace in areas such as intellectual property, privacy, computer crime, and the bounds of jurisdiction will be explored. (SFCC)

IS 140 — Computer and Network Support (5 cr)
This course is a comprehensive, lecture and hands-on course for people who must install and maintain computer systems in a business environment. Hardware technology, operating systems and integration of computers in a network are included in this course. Troubleshooting techniques are studied. Prerequisite: IS 103 or permission of instructor. (SFCC)

IS 144 — Programming Fundamentals (3 cr)
Students learn the system design process and the basics of programming logic. They apply that knowledge with the use of current programming tools. Emphasis is based on process rather than on extensive coding exercises. Prerequisite: IS 120 or permission of instructor. (SFCC)

IS 160 — Internet Fundamentals (1 cr)
This class introduces students to the use of computers for data communications. Students use local area networks (LANs) and telecommunications hardware and software to experience Internet, electronic mail and information services. (SFCC)

IS 162 — Data Communications and Networks (3 cr)
This is an intensive course covering a broad spectrum of telecommunications topics. Telecommunications processes, principles, protocols and media are discussed in depth. Students use telecommunications and network software, study the pros and cons of various systems. The OSI model is studied. Prerequisite: IS 160 or permission of instructor. (SFCC)

IS 210 — Internet Programming I (1-5 cr)
Students create web pages using XHTML and other scripting languages. Experience is gained in designing and structuring effective and accessible web pages, including pages with tables, forms and frames. Students format pages using cascading style sheets and advanced concepts, including Applets, Flash, XML and JavaScript for XHTML documents. Credits are determined by the successful completion of modules as required by the program or personal learning goals. This course may be repeated up to a maximum of 5 credits. (SFCC)

IS 212 — Internet Programming II (5 cr)
This course applies client-side Internet programming technologies to create dynamic web pages. Students are introduced to basic programming techniques using JavaScript and other scripting languages. Prior training in HTML is required. Prerequisite: IS 210. (SFCC)

IS 228 — Internet Servers (5 cr)
This course provides an overview of services installed on an Internet server. Email servers, web servers, database servers will be installed, configured, secured and managed on multiple platforms. Prerequisite: IS 262. (SFCC)

IS 234 — Computer Forensics I (5 cr)
Students learn to provide a secure computer environment and learn techniques for collecting and analyzing computer-related evidence. This class is designed to train computer technicians in the elements of computer forensics investigation. Prerequisite: IS 132 or permission of instructor. (SFCC)

IS 236 — Computer Forensics II (5 cr)
Students learn to provide a secure computer environment and learn techniques for collecting and analyzing computer-related evidence. This class is designed to train computer technicians in the elements of computer forensics investigation. Prerequisite: IS 234 or permission of instructor. (SFCC)

IS 244 — Network Security I (5 cr)
Network Security focuses on the fundamental principles of computer and network security. It is a survey of security fundamentals, networks threats, network operating systems security features, firewalls, virtual private networks, encryption and intrusion detection. Prerequisite: Permission of instructor. (SFCC)

IS 245 — Network Security II (5 cr)
This course is an introduction to the development of Network Systems defense and countermeasures. Students learn the steps utilized to respond to techniques used to compromise networks. It specifically leads students through the process of learning the foundations of network security, firewall implementation and intrusion detection. Prerequisite: IS 244 or permission of instructor. (SFCC)

IS 260 — Database Theory (5 cr)
This course serves as a foundation for working with all types of databases. It reviews what a database is and moves into the various database models such as hierarchical, network, relational, entity and object oriented. It also covers design concepts, SQL, normalization and database administration. Prerequisite: Permission of instructor. (SFCC)

IS 262 — Network Management (5 cr)
This is an intensive course in the technical management of computer networks including servers and workstations. Students, who are expected to understand the principles of telecommunications, will learn to install, manage and maintain a network. Microsoft and Linux are the primary software used. However, other Network Operating Systems (NOS) are installed. This course stresses concepts and practical usage of many types of NOS. Prerequisite: IS 162. (SFCC)

IS 266 — Cooperative Education Seminar (1-2 cr)
For course description, see Cooperative Education. (SFCC)

IS 267 — Cooperative Education Work Experience (1-18 cr)
For course description, see Cooperative Education. (SFCC)

COOPERATIVE EDUCATION

COOP 266 — Cooperative Education Seminar (1-2 cr)
Students study areas such as self-awareness and assessment, career awareness and exploration, career decision making, career planning and placement, success factors and attitudes on the job, motivation and initiative, human behavior and relations, and employability skills. A maximum of six credits are allowed toward any degree. Prerequisite: Permission of instructor/Coordinator. (SCC, SFCC)

COOP 267 — Cooperative Education Work Experience (1-18 cr)
This course offers coordinated on-the-job, supervised work experience related to the student's field of study. Students may receive variable credits for hours of structured work experience during a quarter. The credit award is based on a maximum of one credit for every three weekly cooperative education hours during a quarter. See specific program requirements for number of credits allowed. Prerequisite: Permission of instructor/Coordinator. (SCC, SFCC)

COOP 288 — Cooperative Education Work Experience (No Seminar) (1-18 cr)
This course offers coordinated on-the-job, supervised work experience related to the student's field of study. Students may receive variable credits for hours of structured work experience during a quarter. The credit award is based on a maximum of one credit for every five weekly cooperative education hours during a quarter. See specific program requirements for number of credits allowed. This course differs from COOP 267 in that it has no seminar requirement. Prerequisite: Permission of instructor/Coordinator. (SCC, SFCC)

COSMETOLOGY

COS 101 — Introduction to Cosmetology (2 cr)
This course provides introductory concepts in cosmetology. Students learn licensing requirements and state laws, the importance of rest and relaxation, effective communication, and human relationship skills. (SCC)

COS 111 — Cosmetology, Esthetics and Manicuring Concepts I (5 cr)
Students are introduced to the basic concepts of cosmetology. Theories introduced include manicuring, pedicuring, haircutting, permanent waving, hair styling, coloring, shampooing, rinsing, draping and thermal styling. Bacteriology, sterilization and sanitation also are presented. Prerequisite: Concurrent enrollment in COS 112, APLED 121 or permission of department. (SCC)

COS 112 — Cosmetology, Esthetics and Manicuring Applications I (12 cr)
Students are introduced to the basic application techniques and clinical practice on models and mannequins in the areas of thermal styling, hair shaping and styling, shampooing, rinsing and conditioning, permanent waving, manicuring and pedicuring. Safety and sanitary measures are emphasized. No more than 25 percent of the services are performed on mannequins. Prerequisite: Concurrent enrollment in COS 111, APLED 121 or permission of department. (SCC)

COS 121 — Cosmetology, Esthetics and Manicuring Concepts II (5 cr)
Students are introduced to the basic concepts of skin and nail care, and their disorders and diseases. Chemistry for esthetics, electricity and light therapy also are introduced. Bacteriology, decontamination and infection control are emphasized. Prerequisite: COS 111, 112 and concurrent enrollment in CIS 105, COS 122, EMS 120 or permission of department. (SCC)

COS 122 — Cosmetology, Esthetics and Manicuring Applications II (11 cr)
Students are introduced to the basic application techniques and clinical practice on patrons for facials, packs, masks, machine facials, massage, temporary superfluous hair removal, eyebrow arching, lash and brow tintings, and artificial lashes. No more than 25 percent of the services are performed on mannequins. Prerequisite: COS 111, 112 and concurrent enrollment in CIS 105, COS 121, EMS 120 or permission of department. (SCC)

COS 131 — Intermediate Cosmetology I (5 cr)
This comprehensive course introduces intermediate concepts of hair and scalp structures, disorders, and diseases. Haircutting, permanent waving, hair coloring and curl reformation are emphasized. Prerequisite: COS 121, 122 and concurrent enrollment in COS 132 or permission of department. (SCC)

COS 132 — Intermediate Cosmetology Applications I (11 cr)
Students are introduced to intermediate application and clinical practice in all aspects of cosmetology with emphasis on permanent waving, hair coloring and cutting techniques, and curl reformation. No more than 25 percent of the services are performed on mannequins. Prerequisite: COS 121, 122 and concurrent enrollment in COS 131 or permission of department. (SCC)

COS 232 — Management and Laboratory Supervision (16 cr)
This course provides training in management and laboratory supervision for cosmetology students. (SCC)

COS 241 — Intermediate Cosmetology II (5 cr)
This comprehensive course introduces intermediate concepts of hair styling, permanent waving chemistry, and the care and styling of artificial hair. An in-depth review of skin disorders, as well as hair and scalp disorders, is discussed. Prerequisite: COS 131, 132 and concurrent enrollment in APLED 112, COS 242 or permission of department. (SCC)

COS 242 — Intermediate Cosmetology Applications II (10 cr)
Students are introduced to permanent waving chemistry, intermediate concepts of hair styling, and the care and styling of artificial hair. An in-depth review of skin, hair and scalp disorders is presented. No more than 25 percent of the services are performed on mannequins. Prerequisite: COS 131, 132 and concurrent enrollment in APLED 112, COS 241 or permission of department. (SCC)

COS 251 — Advanced Cosmetology I (5 cr)
This course presents advanced concepts of hair color chemistry and a comprehensive review of haircutting, styling and skin disorders in preparation for the state board exam. Prerequisite: COS 241, 242 and concurrent enrollment in APLED 125, COS 252 or permission of department. (SCC)

COS 252 — Advanced Cosmetology Applications I (10 cr)
This course introduces advanced applications and clinical practice in all aspects of cosmetology with emphasis on permanent waving, haircutting, coloring and styling. No more than 25 percent the services are performed on mannequins. Prerequisite: COS 241, 242 and concurrent enrollment in APLED 125, COS 251 or permission of department. (SCC)

COS 261 — Advanced Cosmetology II (5 cr)
This comprehensive course prepares students for the state board examination with a complete review of textbooks. Hair chemistry and properties, electricity, nail structures and disorders are emphasized. Prerequisite: COS 251, 252 and concurrent enrollment in COS 262, MMGT 205 or permission of department. (SCC)

COS 262 — Advanced Cosmetology Applications II (7-10 cr)
This course introduces advanced applications and clinical practice in all phases of manicuring and cosmetology. Hair styling, haircutting and chemical applications are emphasized. No more than 25 percent of the services are performed on mannequins. Prerequisite: COS 251, 252 and concurrent enrollment in COS 261, MMGT 205 or permission of department. (SCC)

COS 266 — Cooperative Education Seminar (1-2 cr)
For course description, see Cooperative Education. (SCC)

COS 267 — Cooperative Education Work Experience (1-18 cr)
For course description, see Cooperative Education. (SCC)

COS 275 — Cosmetology Application (1-5 cr)
This class provides students with additional time in order to meet Cosmetology state licensure requirements of 1600 hours. Prerequisite: Completion of all seven quarters of Cosmetology program, two quarters of manicuring program or two quarters of esthetics program. (SCC)

COS 288 — Cooperative Education Work Experience (No Seminar) (1-18 cr)
For course description, see Cooperative Education. (SCC)

CREDIT AND FINANCIAL MANAGEMENT

CRMGT 110 — Introduction to Finance (3 cr)
Principles of finance in the operations of a profit-seeking firm, problems involved in the acquisition and use of funds, sources and instruments of capital and finance, financial organization, and financing of operations from the viewpoints of both supplier and user of funds. Prerequisite: ACCT& 201 or permission of instructor. (SFCC)

CRMGT 140 — Financial Statement Analysis (3 cr)
Tools and techniques necessary for evaluation of financial and operating performance of a modern business enterprise. Subjects include statement spreading, basic concepts and ratio analysis, trend analysis, external analysis, short-term liquidity and solvency, financial strength, and asset utilization. Prerequisite: ACCT& 201 or permission of instructor. (SFCC)

CRMGT 150 — Introduction to Investments (2 cr)
An introduction to the world of stocks, bonds, mutual funds, commodities and real estate. Course focuses on investment goals, alternatives, information, process and portfolio management. (SFCC)

CRMGT 190 — Business Credit Principles (3 cr)
This course provides an introduction to the overall field of credit in the U.S. economy. It examines both consumer credit and commercial credit from the standpoint of providers. The course covers the role of credit, types of credit, credit administration, examination, evaluation, and collection and credit files. (SFCC)

CRMGT 220 — Credit Law/Collection Techniques (3 cr)
This course provides an introduction to credit technology. Emphasis is on solving case problems and actual credit situations. Techniques for more effective, timely collections including letters, telephone calls, personal visits and legal remedies are explored. Basic consumer and commercial credit laws for managers are considered. Prerequisite: CRMGT 190 or permission of instructor. (SFCC)

CRIMINAL JUSTICE

CJ& 101 — Intro to Criminal Justice (5 cr)
This course is an overview of the scope of the law enforcement officer's role. Jurisdiction of local, state and federal agencies, career opportunities and qualifications for recruitments are emphasized. (SCC)

CJ 102 — Administration of Justice (5 cr)
Students explore the processes of criminal justice in this course. The court system, corrections, juvenile justice and the law officer's role are emphasized. (SCC)

CJ 103 — Police Organization and Administration (3 cr)
Students are introduced to principles, concepts and theories relating to police organization and administration within line and staff functions in the uniform and investigative units. (SCC)

CJ 104 — Crime Scene Diagramming (5 cr)
The course emphasis is on the reconstruction of traffic collision scenes and crime scenes. This course prepares students to accurately diagram collision and crime scenes using standard measuring equipment and computer based hardware and software, to aid investigations and prepare exhibits for court. (SCC)

CJ& 105 — Intro to Corrections (5 cr)
Principles and practices of the corrections field are explored in this course. Objectives of probation and parole with an overview of rehabilitation methods and institutional settings are emphasized. (SCC)

CJ 106 — Introduction to Juvenile Control (3 cr)
This course covers the elements, functions and purpose of juvenile law. Arrest, detention, petition, records, interviewing interrogation, overview of contributing factors to delinquency and the officer's role in prevention are emphasized. (SCC)

CJ 107 — Dynamics of Deviant Behavior (5 cr)
Students identify, compare and analyze common behaviors exhibited by offenders in corrections. (SCC)

CJ 108 — Introduction to Traffic Investigation (3 cr)
Students gain basic skills and knowledge in traffic accident investigation. Practical applications and techniques required to conduct a field investigation are emphasized. Basics of traffic control and traffic laws also are presented. Prerequisite: CJ& 101, 102, 104. (SCC)

CJ 132 — Criminal Justice Physical Training (1 cr)
The concepts of personal physical training development are explored in this course. Students work at an individualized pace building their fitness required by Washington State Law Enforcement Standards. Students are required to be enrolled in law enforcement physical training during each quarter of attendance. Prerequisite: Students must have medical insurance and a doctor's release if needed; fitness assessment required. If assessed below minimum fitness level, CJ 208 is recommended. Concurrent enrollment in PE 186 for audit or credit. (SCC)

CJ 133 — Criminal Justice Physical Training (1 cr)
The concepts of personal physical training development are explored in this course. Students work at an individualized pace building their fitness required by Washington State Law Enforcement Standards. Students are required to be enrolled in law enforcement physical training during each quarter of attendance. Prerequisite: Students must have medical insurance and a doctor's release if needed; fitness assessment required. If assessed below minimum fitness level, CJ 208 is recommended. Concurrent enrollment in PE 186 for audit or credit. (SCC)

CJ 150 — Criminal Justice Report Writing (3-5 cr)
This course presents technical writing content specific to the criminal justice system. Students learn standard grammar/punctuation and basic composition skills. The content is chosen from a menu that may include, but is not limited to, the following: standard police reports where information may be obtained from investigations, interrogations or other written reports; forms such as traffic citations, traffic accidents or evidence tags; and a variety of technical reports related to law enforcement. (SCC)

CJ 200 — Officer's Survival (5 cr)
Students develop principles and skills of risk management as related to daily patrol situations. Skills include cover vs. concealment, command, contain, control and coordination, as well as communication, background and kill zone tactics. Students' skills are tested in a series of real-to-live police situations (field problems). Prerequisite: CJ 150, 201, 205, 237. (SCC)

CJ 201 — Laws of Arrest, Search and Seizure (5 cr)
Concepts of how to conduct a lawful arrest; search and seizure of suspects and evidence; and practicalities of conducting a search of persons, cars and houses are emphasized in this course. Prerequisite: CJ& 101, CJ 102. (SCC)

CJ 203 — Police Interviewing Techniques (3 cr)
The use of scientific interrogation aids are introduced in this course. Complaints, witnesses, psychological implications, admissions, confessions and statements are explored. (SCC)

CJ 205 — Introduction to Criminal Law (5 cr)
Basic concepts of Title 9 and 9A of the Revised Code of Washington are presented in this course. Elements, purposes and functions of criminal law are emphasized. Prerequisite: CJ& 101, CJ 102. (SCC)

CJ 208 — Criminal Justice Fitness Seminar (3 cr)
Personal physical training and nutrition are explored in this course to prepare students for the rigors of CJPT courses. Students work on fitness training and nutrition specifically required to bring them to a level of fitness required to successfully train with CJPT students and to ultimately reach appropriate standards of fitness required for entrance to law enforcement or corrections academies. May be repeated up to a maximum of 6 credits. CJ 208 may be substituted up to two times, to meet graduation requirements for any of the following courses: CJ 132, 133, 241, 242 or 243. Prerequisite: Concurrent enrollment in PE 186 for audit or credit. (SCC)

CJ 209 — Human Relations (3 cr)
Students develop objective approaches to human relations problems. Students must demonstrate the ability to exercise skills in personal power and nonjudgmental communication skills. (SCC)

CJ 210 — Police Psychology (3 cr)
Theories of perception, emotion, motivation, personality and nonverbal communication used as tools by police officers in everyday contacts are introduced in this course. Understanding behavior and predicting human behavior in common police situations are emphasized. (SCC)

CJ 211 — Crime Scene Investigations (6 cr)
This comprehensive course covers all aspects of crime scene investigations. Areas of emphasis include fundamentals and techniques of investigations; crime scene search; field applications in the development, collection and preservation of physical evidence. Classification and rules of evidence, admissibility, weight and value of evidence, witnesses, and presentation of evidence in court also are included. Prerequisite: CJ 104, 150, 201, 203, 205. (SCC)

CJ 212 — Professional Development (1 cr)
A variety of self-development activities are provided throughout this course to assist students in gaining employment after graduation. Activities include civil service examinations, both written and oral, and exercises in professional conduct. This course is required in one of the students' last two quarters prior to graduation. Corrections students must take this course in each of their last three quarters of attendance. (SCC)

CJ 215 — Corrections-Security-Practice and Procedure (5 cr)
Students learn to perform necessary security and procedural functions, operate security devices and understand inmate management principles utilized in security settings. (SCC)

CJ 216 — Communication Techniques with the Incarcerated Offender (5 cr)
This course integrates an array of communications skills and techniques that are used effectively when working with offenders in correctional settings. (SCC)

CJ 225 — Advanced Techniques in Correctional Programming (5 cr)
Students engage in the process of studying, practicing and evaluating correctional program and treatment approaches. (SCC)

CJ 227 — Minority Studies (5 cr)
Students study and participate in discussions of ethnic history, cultural conflicts and legal rights issues, and how they affect the offender. (SCC)

CJ 228 — Ethics - Standards of Conduct (3 cr)
Issues of attitudes, professional responsibility, ethics of professional relationships and personal appearances are incorporated in this seminar format. Interaction with offenders and professionals in the field is included. (SCC)

CJ 230 — Institutional Programming (3 cr)
Students develop program plans, learn prisoners' rights, and supervise and manage inmates. (SCC)

CJ 235 — Firearms Safety (2 cr)
Students explore the handling and use of firearms. The development of skills in safety and proficiency in the basic firing positions is emphasized. This course is not designed for students to develop qualifying proficiency. Prerequisite: Permission of instructor and concurrent enrollment in CJ 236. (SCC)

CJ 236 — Firearms Qualifications (2 cr)
Students develop marksmanship ability in this course. Students passing the firearms course attain the qualifying score on the approved P.P.C. course. Prerequisite: Permission of instructor and concurrent enrollment in CJ 235. (SCC)

CJ 237 — Criminal Justice Self-defense (3 cr)
Students study weaponless defense of police officers emphasizing mental control of suspects, crowd control and proper use of the police baton. Prerequisite: Students must pass one quarter of criminal justice physical training with a 2.0 or higher. (SCC)

CJ 241 — Criminal Justice Physical Training (1 cr)
The concepts of personal physical training development are explored in this course. Students work at an individualized pace building their fitness required by Washington State Law Enforcement Standards. Students are required to be enrolled in law enforcement physical training during each quarter of attendance. Prerequisite: Students must have medical insurance and a doctor's release if needed; fitness assessment required. If assessed below minimum fitness level, CJ 208 is recommended. Concurrent enrollment in PE 186 for audit or credit. (SCC)

CJ 242 — Criminal Justice Physical Training (1 cr)
The concepts of personal physical training development are explored in this course. Students work at an individualized pace building their fitness required by Washington State Law Enforcement Standards. Students are required to be enrolled in law enforcement physical training during each quarter of attendance. Prerequisite: Students must have medical insurance and a doctor's release if needed; fitness assessment required. If assessed below minimum fitness level, CJ 208 is recommended. Concurrent enrollment in PE 186 for audit or credit. (SCC)

CJ 243 — Criminal Justice Physical Training (1 cr)
The concepts of personal physical training development are explored in this course. Students work at an individualized pace building their fitness required by Washington State Law Enforcement Standards. Students are required to be enrolled in law enforcement physical training during each quarter of attendance. Prerequisite: Students must have medical insurance and a doctor's release if needed; fitness assessment required. If assessed below minimum fitness level, CJ 208 is recommended. Concurrent enrollment in PE 186 for audit or credit. (SCC)

CJ 250 — Career Assessment (2 cr)
The course emphasis is on gathering and documenting career related training and experience in a portfolio that will be assessed for comparable academic credit. Prerequisite: Basic Computer Skills Recommended. Permission of instructor and evidence of employment required and concurrent enrollment in CJ 251. (SCC)

CJ 251 — Career Development (2 cr)
The course emphasis is on using the assessment and credit award from CJ 250 to develop a plan to finish and Associate or Bachelor Degree. Prerequisite: Basic Computer Skills recommended. Permission of instructor and evidence of employment required and concurrent enrollment in CJ 250. (SCC)

CJ 265 — Service Learning Volunteer Project (3 cr)
This course enhances learning by connecting academic subjects to real world experience thus fostering civic duty and citizenship. Students fill community needs with direct, meaningful work enabling them to help others and give of themselves through volunteer service. (SCC)

CJ 266 — Cooperative Education Seminar (1-2 cr)
For course description, see Cooperative Education. (SCC)

CJ 267 — Cooperative Education Work Experience (1-18 cr)
For course description, see Cooperative Education. (SCC)

CJ 270 — Introduction to Homeland Security (5 cr)
An introduction to the vocabulary, components and agencies associated with Homeland Security. An examination of historical events, critical threats and state, national, and international laws impacting Homeland Security. Prerequisite: Basic Computer Skills Recommended. Permission of instructor and evidence of employment required. (SCC)

CJ 271 — Intelligence Analysis and Security Management (5 cr)
An exploration of intelligence gathering and analysis outlining basic intelligence policies and functions of the U.S., including dependability and reliability of source information and applying ethical and professional behaviors to intelligence gathering. Prerequisite: Basic Computer Skills Recommended. Permission of instructor and evidence of employment required. (SCC)

CJ 272 — Transportation and Border Security (5 cr)
Identify vulnerabilities and differing security threats for passenger versus freight transportation systems. Explore roles, functions and interdependency between local, federal, international and military agencies regarding border security. Prerequisite: Basic Computer Skills Recommended. Permission of instructor and evidence of employment required. (SCC)

CJ 288 — Cooperative Education Work Experience (No Seminar) (1-18 cr)
For course description, see Cooperative Education. (SCC)

CULINARY ARTS

CUL 101 — Ice Carving (1-3 cr)
Students learn the fundamentals of ice carving, how to work with power and hand tools, pattern designs, ice block preparation. Each student produces one ice carving using a design of their choice. Lab fees cover the cost of ice blocks used in the course. Prerequisite: Permission of instructor or counselor. (SCC)

CUL 110 — Introduction to Culinary Arts (5 cr)
Students learn basic cooking principles including modern kitchen organization, standards of professionalism, and the tools and equipment used in the cooking process. (SCC)

CUL 115 — Food Sanitation (3 cr)
Students are introduced to basic food service sanitation principles with emphasis on cleaning/sanitation methods and the safe storage of food. (SCC)

CUL 123 — Espresso (1-2 cr)
This course introduces students to the techniques and procedures required to successfully operate an espresso stand. (SCC)

CUL 124 — Cooking Applications I (7-10 cr)
This course continues with the concepts introduced in CUL 110. Students work with raw materials, preliminary cooking and flavoring, and apply a variety of cooking methods including the preparation of stocks, soups, salads, and vegetable and starch products. Prerequisite: Permission of instructor or counselor. (SCC)

CUL 126 — Food Science (5 cr)
This course emphasizes basic cooking methods including the preparation of soups, stocks and sauces; meat, fish and poultry; vegetables, fruits and starches; as well as an introduction to breakfast and baking preparation. Prerequisite: Permission of instructor or counselor. (SCC)

CUL 127 — Banquet Service (2 cr)
Students study theory and learn practical applications in the organization and management of banquets. (SCC)

CUL 131 — A la Carte Service (9 cr)
This course introduces practical applications in the methods used to provide exceptional a la carte services in a variety of settings. Prerequisite: Concurrent enrollment in HM 130. (SCC)

CUL 243 — Theory of Restaurant Baking (5 cr)
Students are introduced to the basic principles of restaurant baking with emphasis on ingredients, yeast dough formulas and techniques, and the mixing and baking of a variety of breads, pies and pastries. (SCC)

CUL 244 — Restaurant Baking Applications (10 cr)
Students are introduced to the preparation of baked goods, desserts and pastries, and the acquisition of baking skills and artistic abilities. Production techniques also are addressed. (SCC)

CUL 253 — Advanced Cooking Theory (5 cr)
Students are introduced to the composition and structure of meats with emphasis on the identification of primal cuts and their relationship to meat selection and cooking methods. Fundamentals of sauce making also is addressed. (SCC)

CUL 254 — A la Carte Cooking I (10 cr)
Students use the skills acquired in CUL 124 and develop more technical skills necessary to cook foods to exceptional levels on a consistent basis while working in a professional kitchen. (SCC)

CUL 255 — Menu Planning (3 cr)
Students are introduced to the composition of menus including the areas of purchasing procedures, merchandising, servicing and pricing of foods. Planning a functional, operative menu using appropriate menu copy and layout is emphasized. Prerequisite: APLED 121. (SCC)

CUL 260 — Presidential (1 cr)
Methods used to provide formal service in a variety of elegant settings are addressed in this course. (SCC)

CUL 263 — Theory of Modern Cuisine (5 cr)
Students are introduced to the cooking principles commonly utilized in the preparation of ethnic and international cuisines. (SCC)

CUL 264 — A la Carte Cooking II (9 cr)
This course continues the concepts introduced in CUL 254 and emphasizes the selection of appropriate cooking methods and the handling, cutting and cooking of a variety of meats and fish products. (SCC)

CUL 265 — Hospitality Cost Controls (5 cr)
Students are introduced to the principles and procedures involved in an effective system of food, labor and sales income control. The development and use of standards, and the calculation of actual costs are emphasized. Prerequisite: Successful completion of first year culinary coursework. (SCC)

CUL 266 — Cooperative Education Seminar (1 cr)
For course description, see Cooperative Education. (SCC)

CUL 267 — Cooperative Education Work Experience (4 cr)
For course description, see Cooperative Education. (SCC)

CUL 288 — Cooperative Education Work Experience (No Seminar) (1-18 cr)
For course description, see Cooperative Education. (SCC)

DENTAL ASSISTING

DENT 111 — Introduction to Dental Assisting (5 cr)
This course is an introduction to the techniques of chairside assisting using principles of four-handed dentistry, instrumentation, maintenance of equipment and administration of local anesthetic. Prerequisite: Concurrent enrollment in DENT 112, 116. (SCC)

DENT 112 — Chairside Related Theory (4 cr)
This course is an introduction to the role of the dental assistant as a member of the dental health team. Techniques and principles of preventive dentistry and microbiology as they relate to aseptic techniques in the dental office are emphasized. Infection control, safety standards and hazardous waste management are addressed. Prerequisite: Concurrent enrollment in DENT 111, 116. (SCC)

DENT 114 — Introduction to Dental Radiology (3 cr)
This course offers instruction in the basic principles of radiography physics, modern intraoral dental radiographic techniques, arrangements and care of darkroom equipment, composition and preparation of solutions, procedure for processing films, mounting films, mannequin practice in exposing films, patient interproximal X-rays for diagnostic purposes, radiation protection and safety guidelines. Prerequisite: Concurrent enrollment in DENT 111, 112, 116. (SCC)

DENT 116 — Dental Restorative Techniques (3 cr)
This course offers instruction in the physical properties, manipulation and uses of dental materials commonly used in restorative dental procedures. Maintenance of equipment used in the laboratory is emphasized. Prerequisite: Enrolled in first quarter of the dental assisting program. (SCC)

DENT 118 — Dental Anatomy (4 cr)
Students learn interrelationships of body structure and functions of all body systems, head and neck anatomy, oral embryology, histology, tooth morphology and dental charting. (SCC)

DENT 121 — Intermediate Chairside Assisting (6 cr)
This course continues with the concepts learned in DENT 111 emphasizing the procedures and instruments of the recognized specialties. Prerequisite: Successful completion of first quarter and concurrent enrollment in DENT 122. (SCC)

DENT 122 — Chairside Related Theory (4 cr)
This course offers instruction in nutrition and dietary counseling as part of dental treatments, applied pharmacology, dental pathology and emergencies in a dental office. Prerequisite: Successful completion of first quarter and concurrent enrollment in DENT 121. (SCC)

DENT 124 — Advanced Dental Radiology (2 cr)
This course offers instruction in advanced techniques of dental radiology, anatomical landmarks and dental anatomy pertaining to dental radiology. Practice taking full-mouth radiographs on children and adults for diagnosis by a dentist and evaluation of films are emphasized. Instruction in maintenance of automatic processors, duplicating, panoramic techniques and equipment also is offered. Prerequisite: Successful completion of first quarter and concurrent enrollment in DENT 121, 122. (SCC)

DENT 126 — Dental Restorative Techniques (4 cr)
This course offers instruction in the physical properties and manipulation of dental materials used in diagnostic and prosthetic procedures. Appropriate instrumentation also is included. Prerequisite: Successful completion of first quarter and concurrent enrollment in DENT 121, 122. (SCC)

DENT 129 — Chairside Clinical Experience (2 cr)
Students acquire clinical practice in handling patients and assisting in four-handed dentistry procedures. The clinical instruction is conducted in selected private dental offices. Clinical assignments are designed to enhance students' competence in performing dental assisting functions. General dentistry is emphasized. Seminars are devoted to evaluation of the clinical experience, discussion of communication in the dental practice and attitude of the dental assisting student. Prerequisite: Successful completion of second quarter with 2.0 GPA or better and satisfactory progress in DENT 121, 122, 124, 126. (SCC)

DENT 131 — Advanced Chairside Assisting (6 cr)
This course offers instruction and practical application of procedures permitted the dental assistant in the State of Washington according to the current State Dental Practice Act. Prerequisite: Successful completion of second quarter. (SCC)

DENT 136 — Dental Restorative Techniques (2 cr)
This course offers advanced instruction in the physical properties and manipulation of dental materials involved in prosthetic procedures. Prerequisite: Successful completion of second quarter and concurrent enrollment in DENT 131. (SCC)

DENT 138 — Office Management (3 cr)
Students learn the nonclinical functions that dental auxiliaries are required to perform emphasizing communications, scheduling, appointments, making financial arrangements, collection techniques, recalls, completion of insurance forms, maintaining an inventory and supply system, and familiarization with computer programs used in dentistry. Prerequisite: Successful completion of second quarter and concurrent enrollment in DENT 131. (SCC)

DENT 139 — Chairside Clinical Experience (8 cr)
Students acquire clinical practice to perfect their competence in performing dental assisting functions that take place under the direct supervision of dentists in private practices, specialties and dental clinics. The major portion of students' time is spent actually assisting or actively participating in patient care. Seminars are held to evaluate and review clinical applications. Prerequisite: Successful completion of second quarter with 2.0 grade or better and satisfactory progress in DENT 131, 136, 138. (SCC)

DENT 141 — EFDA Review Class (5 cr)
This course is designed to provide the Certified Dental Assistant (CDA) review for the Expanded Function Dental Auxiliary (EFDA) course content. The course includes the evaluation of the student's ability to perform skills under the dentist's general supervision to include: Patient oral health instruction; coronal polishing; fluoride treatments; sealants; expose, process and mount dental radiographs. Prerequisite: Successful completion of the Dental Assistant program with a 2.0 grade or better. Admission to the program and concurrent enrollment in DENT 142, 144, 145, 148. (SCC)

DENT 142 — EFDA Review Lab (2 cr)
This course is designed to provide the Certified Dental Assistant (CDA) review for the Expanded Function Dental Auxiliary (EFDA) course content. The course includes correct ergonomic positioning and skills on typodonts and/or simulated patients. Prerequisite: DENT 141, 142. Admission to the program and concurrent enrollment in DENT 141, 144, 145, 148. (SCC)

DENT 144 — EFDA Amalgam Restorations (2 cr)
This course is designed to focuses on the didactic, laboratory and clinical components of the amalgam curriculum to include: Armamentarium including various matrices, classification of restorations; components of the prepared tooth; materials, composition of amalgam, advantages and disadvantages, indications and contraindications; placement, condensing and carving; evaluation of restoration; occlusal adjustment. Prerequisite: DENT 141, 142. Admission to the program and concurrent enrollment in DENT 141, 142, 145, 148. (SCC)

DENT 145 — EFDA Amalgam Lab (4 cr)
This course is designed to focuses on the didactic, laboratory and clinical components of the amalgam curriculum to include: Armamentarium including various matrices, classification of restorations; components of the prepared tooth; materials, composition of amalgam, advantages and disadvantages, indications and contraindications; placement, condensing and carving; evaluation of restoration; occlusal adjustment. This course includes the lab portion of amalgam restoration. Prerequisite: DENT 141, 142. Admission to the program and concurrent enrollment in DENT 141, 142, 144, 148. (SCC)

DENT 148 — EFDA Amalgam Clinical (3 cr)
This course is designed to focuses on the didactic, laboratory and clinical components of the amalgam curriculum to include: Armamentarium including various matrices, classification of restorations; components of the prepared tooth; materials, composition of amalgam, advantages and disadvantages, indications and contraindications; placement, condensing and carving; evaluation of restoration; occlusal adjustment. This course includes the clinical portion of amalgam restoration. Prerequisite: DENT 141, 142. Admission to the program and concurrent enrollment in DENT 141, 142, 144, 145. (SCC)

DENT 151 — EFDA Composite Restorations (3 cr)
This course is designed to focuses on the didactic, laboratory and clinical components of the amalgam curriculum to include: Armamentarium including various matrices, classification of restorations; components of the prepared tooth; materials, composition of composite, advantages and disadvantages, indications and contraindications; placement, condensing and carving; evaluation of restoration; occlusal adjustment. Prerequisite: DENT 141, 142. Admission to the program and concurrent enrollment in DENT 152, 154, 155, 158, 160. (SCC)

DENT 152 — EFDA Composite Lab (4 cr)
This course is designed to focuses on the didactic, laboratory and clinical components of the amalgam curriculum to include: Armamentarium including various matrices, classification of restorations; components of the prepared tooth; materials, composition of composite, advantages and disadvantages, indications and contraindications; placement, condensing and carving; evaluation of restoration; occlusal adjustment. This course includes the laboratory portion of the course. Prerequisite: DENT 141, 142. Admission to the program and concurrent enrollment in DENT 151, 154, 155, 158, 160. (SCC)

DENT 154 — EFDA Composite Clinical (3 cr)
This course is designed to focuses on the didactic, laboratory and clinical components of the amalgam curriculum to include: Armamentarium including various matrices, classification of restorations; components of the prepared tooth; materials, composition of composite, advantages and disadvantages, indications and contraindications; placement, condensing and carving; evaluation of restoration; occlusal adjustment. This course includes the clinical portion of the course. Prerequisite: DENT 141, 142. Admission to the program and concurrent enrollment DENT 151, 152, 155, 158, 160. (SCC)

DENT 155 — EFDA Impressions/Provisional (3 cr)
This course is designed to focuses on the didactic, laboratory components of the taking preliminary and final impressions and bite registrations to include computer assisted design and computer assisted manufacture applications. Prerequisite: DENT 141, 142. Admission to the program and concurrent enrollment in DENT 151, 152, 154, 158, 160. (SCC)

DENT 158 — EFDA Impressions/Provisional-Lab (2 cr)
This course is designed to focuses on the didactic, laboratory components of the taking preliminary and final impressions and bite registrations to include computer assisted design and computer assisted manufacture applications. This course includes the laboratory portion of the course. Prerequisite: DENT 141, 142. Admission to the program and concurrent enrollment in DENT 151, 152, 154, 155, 158, 160. (SCC)

DENT 160 — EFDA Exam Preparation (3 cr)
This course is designed to focuses on the didactic, laboratory components of the taking preliminary and final impressions and bite registrations to include computer assisted design and computer assisted manufacture applications. This course includes the examination portion of the course. Prerequisite: DENT 141, 142. Admission to the program and concurrent enrollment in DENT 151, 152, 154, 155, 158. (SCC)

DIAGNOSTIC MEDICAL SONOGRAPHY

SONO 111 — Diagnostic Ultrasound I (2 cr)
This course is an introduction to the field of diagnostic sonography and the role of the sonographer. The importance of professionalism, ethical and legal issues including AIDS and written communications is stressed. Various types of sonographic procedures will be discussed with their applications to abdominal scanning. Various discussion groups and tours are an integral component of this course. Prerequisite: Admission to the Diagnostic Medical Sonography program and concurrent enrollment in SONO 121, 125. (SCC)

SONO 112 — Vascular Fundamentals (4 cr)
This course is an introduction to basic vascular anatomy of the lower and upper extremities, abdomen, visceral organs and cerebral vasculature with emphasis on the physiology of these systems. An introduction to the concepts essential for the performance and interpretation of vascular exams is also included. Laboratory experience is required. (SCC)

SONO 121 — Human Cross-Section Anatomy (4 cr)
Transverse and sagittal cross-sectional anatomy of the human body is compared to the tomographic images obtained by ultrasound, magnetic resonance (MR) and computed tonography (CT). Emphasis is placed on gross human anatomy as sliced into tomographic planes and the tissue characteristics that create image variations. Laboratory experience is provided. Prerequisite: Admission to Diagnostic Medical Sonography Program and concurrent enrollment in SONO 111, 125. (SCC)

SONO 125 — Ultrasound Physics and Instrumentation I (5 cr)
This course emphasizes ultrasound physics, the physics of waves, sound transmission, attenuation, pulse wave principles, transducer and ultrasound systems operations. Prerequisite: Admission to Diagnostic Medical Sonography Program and concurrent enrollment in SONO 111, 121. (SCC)

SONO 131 — Diagnostic Ultrasound II (5 cr)
This course is an investigation of the application for ultrasound in the abdomen, small parts and intraoperative. The pathophysiology of the abdomen, small parts and intraoperative applications is discussed. Emphasis is on the technique and image assessment. Both normal and abnormal anatomy is identified. Laboratory experience is provided. Prerequisite: Concurrent enrollment in SONO 135. (SCC)

SONO 135 — Ultrasound Physics and Instrumentation II (5 cr)
This is a continuation of the concepts introduced in SONO 125. Ultrasound physics with emphasis on the Doppler techniques, artifacts, and utilizing instrumentation to investigate the principles of Doppler technique and artifacts. Prerequisite: Admission to Diagnostic Medical Sonography Program and concurrent enrollment in SONO 131. (SCC)

SONO 141 — Diagnostic Ultrasound III (5 cr)
Ultrasonic procedures and techniques utilized within the OB/GYN specialty are discussed. Scanning techniques, pathology and ethical issues are also included. Laboratory experience is provided using ultrasound simulation to develop normal and abnormal anatomy identification. Prerequisite: Admission to Diagnostic Medical Sonography program and concurrent enrollment in SONO 131. (SCC)

SONO 142 — Diagnostic Ultrasound IV (4 cr)
Applications of ultrasound in the assessment of normal structures and pathology found within the areas of neck, thyroid, prostate, scrotum, breast and musculoskeletal structures. Emphasis is placed on the sonographic identification of anatomy and pathophysiology using sonographic techniques. Laboratory experience is provided and required. (SCC)

SONO 143 — Sonography Clinical I (6 cr)
Students are introduced to the clinical environment by spending four weeks in the clinical setting under the direction of a staff sonographer. Weekly clinical seminars are conducted with faculty. A clinical consciousness is developed with emphasis on professionalism, clinical rapport, medical ethics and patient care. Prerequisite: Admission to Diagnostic Medical Sonography program and concurrent enrollment in SONO 142. (SCC)

SONO 251 — Advanced Sonography (6 cr)
Advanced applications of ultrasound in the assessment of pathophysiology found within the abdominal scan, small parts and intraoperative scans, and OB/GYN scans are discussed. Emphasis is placed on the identification of anatomy and physiology as identified in the abnormal situation using ultrasound. Laboratory experience is provided using simulators to identify various pathological conditions. Prerequisite: Admission to Diagnostic Medical Sonography program and concurrent enrollment in SONO 253. (SCC)

SONO 253 — Sonography Clinical II (7 cr)
This course provides hands-on experience in the hospital and clinical environment. Emphasis is placed on the development of clinical techniques in the use of current ultrasound instrumentation in the evaluation of an acquired disease. Students then apply the principles of medical legal ethics and professionalism to the patient, physicians and other members of the health team. Clinical case reports are required. Prerequisite: Admission to Diagnostic Medical Sonography program concurrent enrollment in SONO 251. (SCC)

SONO 263 — Sonography Clinical III (13 cr)
This course provides hand-on experience in the hospital and clinical environment. Emphasis is placed on the development of clinical techniques in the use of current ultrasound instrumentation in the evaluation of an acquired disease. Students then apply the principles of medical legal ethics and professionalism to the patient, physicians and other members of the health team. Clinical case reports are required. Prerequisite: Admission to Diagnostic Medical Sonography program. (SCC)

SONO 273 — Sonography Clinical IV (13 cr)
This course is a continuation of SONO 263. This course is a full-time clinical internship and is completed in an affiliated local or out-of-town hospital, clinic or physician's office. Emphasis of this course is on the clinical skills necessary for the performance of and evaluation of the various sonography procedures. Written reports, review of current literature and attendance at conferences is required. Prerequisite: Admission to Diagnostic Medical Sonography program. (SCC)

DIESEL/HEAVY DUTY EQUIPMENT

HEQ 111 — Basic Electrical Theory (7 cr)
Students are introduced to the theories of basic low voltage DC electricity and mobile air conditioning and their application to the repair of heavy equipment systems. Ignition systems, starting and charging systems, vehicle wiring and auxiliary electrical/electronic components are emphasized. Prerequisite: Concurrent enrollment in HEQ 112. (SCC)

HEQ 112 — Basic Electrical Applications (9 cr)
Students continue learning the concepts introduced in HEQ 111 with emphasis on the diagnosis and repair of low voltage DC electrical and mobile air conditioning systems common to heavy equipment. Prerequisite: Concurrent enrollment in HEQ 111. (SCC)

HEQ 121 — Basic Principles of Engine Theory (7 cr)
Students are introduced to basic engine theory and operation, and their application to the maintenance and repair of heavy equipment. Engine systems and their component parts are emphasized. Prerequisite: Concurrent enrollment in HEQ 122. (SCC)

HEQ 122 — Basic Engine Applications (9 cr)
Students continue learning concepts introduced in HEQ 121 with emphasis on the diagnosis and repair of the basic gasoline and diesel engine systems common to heavy equipment. Prerequisite: Concurrent enrollment in HEQ 121. (SCC)

HEQ 131 — Principles of Power Train Theory (7 cr)
Students are introduced to the theory and operation of clutches, transmissions, differentials, brakes (air and hydraulic), and their application to heavy equipment. Prerequisite: Concurrent enrollment in HEQ 132. (SCC)

HEQ 132 — Power Train Applications (9 cr)
Students continue to learn the concepts introduced in HEQ 131 with emphasis on the diagnosis and repair of clutches, transmissions, differential (air and hydraulic). Practice in the repair and maintenance of bearings and seals, steering and alignment, and fluid couplings is covered. The correct use of specialized shop tools and equipment is emphasized. Prerequisite: Concurrent enrollment in HEQ 131. (SCC)

HEQ 241 — Heavy Equipment Hydraulic Theory (7 cr)
Students are introduced to basic hydraulic theory and operation and their application to the maintenance and repair of heavy equipment. Hydraulic systems and their component parts are emphasized. Prerequisite: HEQ 111, 112, 121, 122, 131 and 132, or permission of instructor and concurrent enrollment in HEQ 242. (SCC)

HEQ 242 — Heavy Duty Equipment Hydraulic Application (9 cr)
This course offers practical application of students' knowledge. Students diagnose, repair and test a variety of hydraulic equipment. Prerequisite: HEQ 111, 112, 121, 122, 131 and 132, or permission of instructor and concurrent enrollment in HEQ 241. (SCC)

HEQ 251 — Practical Shop Procedures (7 cr)
This course offers practical shop application of students' knowledge and skills for the repair of basic electrical, engine, power train and heavy equipment. Prerequisite: HEQ 111, 112, 121, 122, 131 and 132, or permission of instructor and concurrent enrollment in HEQ 252. (SCC)

HEQ 252 — Practical Shop (9 cr)
This course continues with practical shop skills acquired in HEQ 251. Students receive shop experience in repairing a wider variety of heavy equipment. Prerequisite: HEQ 111, 112, 121, 122, 131 and 132, or permission of instructor and concurrent enrollment in HEQ 251. (SCC)

HEQ 261 — Practical Shop Procedures (7 cr)
This course continues with practical shop experience gained in HEQ 251, 252. Simulated shop operations for the repair and maintenance of various power train components are emphasized. Prerequisite: HEQ 111, 112, 121, 122, 131 and 132, or permission of instructor and concurrent enrollment in HEQ 262. (SCC)

HEQ 262 — Practical Shop (6 cr)
Students learn extensive practical applications of all aspects of heavy equipment repair. Use of specialized equipment, tools, machines and techniques is emphasized. In addition, comprehensive diagnosis and repair of transmissions are stressed. Prerequisite: HEQ 111, 112, 121, 122, 131 and 132, or permission of instructor and concurrent enrollment in HEQ 261. (SCC)

HEQ 266 — Cooperative Education Seminar (1-2 cr)
For course description, see Cooperative Education. (SCC)

HEQ 267 — Cooperative Education Work Experience (1-18 cr)
For course description, see Cooperative Education. (SCC)

HEQ 288 — Cooperative Education Work Experience (No Seminar) (1-18 cr)
For course description, see Cooperative Education. (SCC)

HEQ 294 — Special Problems (3 cr)
Individualized student needs are addressed in this shop program. Students are assigned specialized shop projects and receive in-depth instruction about the specific aspects of heavy equipment repair. Prerequisite: Permission of instructor. (SCC)

DRAMA

DRMA& 101 — Intro to Theatre (5 cr)
Dramatic forms and styles, historic developments of the theater and contemporary theater practices. Prerequisite: SFCC only: Recommended minimum reading placement score: COMPASS 80, ASSET 40. (SCC, SFCC)

DRMA 106 — Rehearsal and Performance (1-5 cr)
This is a course in which students receive training and practical experience in acting, directing or technical theater. Each quarter's production provides the necessary laboratory experience. Recommended for those desiring an overall acquaintance with various phases of theatrical production. Prerequisite: Permission of instructor. (SCC, SFCC)

DRMA 107 — Rehearsal and Performance (1-5 cr)
This is a course in which students receive training and practical experience in acting, directing or technical theater. Each quarter's production provides the necessary laboratory experience. Recommended for those desiring an overall acquaintance with various phases of theatrical production. Prerequisite: Permission of instructor. (SCC, SFCC)

DRMA 108 — Rehearsal and Performance (1-5 cr)
This is a course in which students receive training and practical experience in acting, directing or technical theater. Each quarter's production provides the necessary laboratory experience. Recommended for those desiring an overall acquaintance with various phases of theatrical production. Prerequisite: Permission of instructor. (SCC, SFCC)

DRMA 120 — Performance and Audition Techniques (3 cr)
Familiarization with the stage and technique in movement, development of technique and character through pantomimic suggestion, and study of the script from the actor's point of view. (SFCC)

DRMA 121 — Contemporary Acting (3 cr)
Definition of character and exercises in character portrayal, definition of mood or emotion and exercises in portrayal of attitude, and performance of characterization in representative scenes from major works of dramatic literature. Prerequisite: DRMA 106 or 120 or permission of instructor. (SFCC)

DRMA 211 — Scenic Design I (3-5 cr)
Students learn the foundations and processes of scenic design for the stage, including period research, rendering, 3D modeling and construction. Students participate in the collaborative construction of a set. This course is appropriate for students with interests in drama, interior design and fine arts. (SFCC)

DRMA 212 — Costume Design I (3-5 cr)
Students learn the foundations and processes of costume design, including period research, rendering and fabrication. This course is appropriate for students with interests in drama, fashion and fine arts. (SFCC)

DRMA 220 — Classical Acting (5 cr)
Students study definition of character and exercises in character portrayal, definition of mood or emotion. They do exercises in portrayal of attitude and performance of characterization in scenes from major classical works of dramatic literature. Prerequisite: DRMA& 101 or DRMA 120 or 121 or permission of instructor. (SFCC)

DRMA 221 — Acting for Film and Television (5 cr)
Acting for film focuses on honing actors' skills essential for performances in front of the camera. The approach is very pragmatic. Emphasis is given to the differences between stage and camera performances, learning roles instead of lines, how the changing camera affect performance, the use of the voice for the camera, auditioning for a role, and participating in a shoot. Prerequisite: DRMA& 101 or DRMA 120 or 121 or permission of instructor. (SFCC)

DRMA 230 — Stagecrafting Theatrical Design (1-5 cr)
Students become proficient in understanding the theater environment, specifically theory of scene design and plans, construction techniques, scene painting, stage lighting techniques, purpose of lighting and design and costuming, properties and sound. May be repeated for a total of 15 credits. (SFCC)

DRMA 233 — Makeup (2 cr)
Purposes of stage makeup, physical features affected by makeup techniques, and technical skills in the application of stage makeup. (SFCC)

DRMA 266 — Cooperative Education Seminar (1-2 cr)
For course description, see Cooperative Education. (SCC)

DRMA 267 — Cooperative Education Work Experience (1-18 cr)
For course description, see Cooperative Education. (SCC)

EARLY CHILDHOOD EDUCATION

ECED 100 — Basic Child Care Training (2 cr)
This course is designed to provide the 20 hours of basic childcare training for child care providers. The course is based on the Adult-sized Guide to Child-size Environments and includes the recommended learning outcomes for Washington State Training and Registry System (S.T.A.R.S.) initial training. (SFCC)

ECED 101 — Issues and Trends in Early Childhood Education (5 cr)
This course examines the current and future issues and trends in early childhood education, with an international and historical perspective. The organizations and support systems for early childhood professionals are explored. (SFCC)

ECED 102 — Observation and Documentation (1-2 cr)
This course orients students to the application component of early childhood education (ECE) courses. Course content focuses on students' 44 hours field experience placement and requirements. Students are introduced to program philosophy, learning opportunity planning, observation and appropriate guidance strategies. If this course is taken prior to first quarter in the ECE program, student registers for 2 credits which consists of 11 lecture hours and 22 field hours with children. If taken concurrent with an ECE class requiring field hours, students register for one credit of 11 lecture hours. (SFCC)

ECED 103 — College Success (3 cr)
This course provides an opportunity for students entering early childhood education to learn about services and strategies to help them become successful college students. Prerequisite: Concurrent enrollment in any ECED course. (SFCC)

ECED 118 — Early Childhood Education Seminar (0.5-11 cr)
These short-term, skill-building seminars provide students with training options for the early childhood education profession. Content focuses on a variety of aspects of early childhood education. Seminars can be taken prior to ECE coursework or to meet one-time and/or ongoing training requirements. These seminars address 11 Core Competencies outlined in the Washington State Training and Registry System (STARS) and can be used to meet annual requirements. (SFCC)

ECED 124 — Methods of Learning (5 cr)
This course provides students with a theoretical overview of curriculum, methods of presentation and learning opportunity planning in the areas of social, emotional, cognitive, physical/motor and creative development for children birth through age eight. Educational philosophies guide the preparation, implementation and presentation of learning opportunities for curriculum within these areas. Forty-four hours of field experience are required. (SFCC)

ECED 125 — Science Methods in ECED (3 cr)
Explore the application of science methods in ECE programs. Develop developmentally appropriate science experiences for children birth to age 8. (SFCC)

ECED 126 — Math Methods in ECED (3 cr)
The course is designed to enhance the use of math in ECED programs by increasing the student's understanding of math and how to design developmentally appropriate experiences for young children. (SFCC)

ECED 132 — Fostering Social Competence (5 cr)
This survey course examines philosophical principles and theories used to guide early childhood educators in fostering the development of social competence in young children. Historical and current values held by society foster techniques for creating the context that supports optimal communication and the building of meaningful relationships among children and educators. Forty-four hours of field experience are required. (SFCC)

ECED 135 — Infant/Toddler Care and Education (5 cr)
The principles and scope of care giving, growth and development, guidance techniques and practical curriculum for working with infants and/or toddlers and their families, are the focus of this course. Forty-four hours of field experience in an infant and toddler environment are required as part of this course. (SFCC)

ECED 190 — Child Development (5 cr)
A survey of historical and current philosophies along with theories of growth and development in physical/motor, creative, social, emotional and cognitive areas are examined for children ages birth through eight. (SFCC)

ECED 226 — Curriculum Development (5 cr)
This course focuses on the past, present and future philosophies and theories used in the planning, implementation and evaluation of effective curriculum strategies and approaches. Fostering the growth and development of young children in the areas of cognitive, physical/motor, social, emotional and creativity are addressed. Forty-four hours of field experience are required. (SFCC)

ECED 230 — Learning Environments (5 cr)
Students analyze and evaluate early childhood environments based on an overview of the theories and philosophies of culturally relevant, anti-bias (CRAB) principles and developmentally appropriate practices (DAP). How the past guides the future in relationship to the role of children's play, assessments and literacy development in the learning environment is explored. (SFCC)

ECED 254 — Dynamics of Family Relationships (5 cr)
The impact of historical, current and future systems theory within which a child and his/her family operates is analyzed. Building an understanding of the philosophical and cultural context regarding children and families is the foundation used to identify ways to support healthy dynamics and to explore solutions to challenges families face. (SFCC)

ECED 260 — Child Care Administration (5 cr)
Childcare philosophy, policies, licensing, organization, personnel administration, supervision and the decision-making process, curriculum planning and evaluation, community resources and problems in operating a child care home or center will be introduced. Specific topics such as licensing regulation, hiring practices, forms, bookkeeping, in-service training, contracts, formative evaluations, community resources and alternative solutions to day-to-day problems may be explored. (SFCC)

ECED 270 — School-age Creative Activities (5 cr)
This course focuses on the planning, implementation and evaluation of effective strategies that address all areas of development for school-age children. These include: Assessing the appropriateness of school-age environment, scheduling and demonstrating learning activities in the college classroom and in an approved field site. Forty-four hours of field experience are required. (SFCC)

ECED 280 — School-age Guidance (5 cr)
This course focuses on developmentally appropriate child guidance strategies for youth, school-age through adolescence. It addresses the role of the caregiver interactions, the child's environment and guidance theories in order to analyze, plan and implement appropriate strategies in an approved field site. Forty-four hours of field experience are required. (SFCC)

ECED 281 — Capstone Practicum (5 cr)
As a capstone experience based on Washington State Skill Standards for Early Childhood Education Lead Teachers, students assume responsibility for assessing, planning, preparing and facilitating a developmentally appropriate learning environment for young children. They document their abilities through videotaping, prepared visuals and an information packet that are used in an oral presentation to a committee of early childhood and college professionals. One hundred and thirty-three hours of field experience are required. (SFCC)

ECED 282 — Practicum I (5 cr)
This course focuses on the documentation of children's growth and development through a portfolio project. One hundred and thirty-three hours of field experience are required. Prerequisite: ECED 102. (SFCC)

ECED 283 — Practicum II (5 cr)
This practicum course is designed to be a synthesizing experience where a student puts theory into practice. It is a continuation of skill building developed in previous practice. Students examine all of the skills/competencies of the professional teacher and develop documentation of his/her own competencies. One hundred and thirty-three hours of field experience are required. Prerequisite: ECED 102. (SFCC)

ECED 290 — School-age Development (5 cr)
A survey of historical and current philosophies along with theories of growth and development in physical/motor, creative, social, emotional and cognitive areas are examined for youth from middle childhood through adolescence. (SFCC)

ECHOCARDIOGRAPHY

ECHO 100 — Introduction to Echo and Vascular (2 cr)
Introduction to the field of Echocardiography and Vascular Technology with emphasis on the role of these career pathways. Stresses the importance of professionalism, ethical behavior, and communications. Career opportunities, credentialing, program and health science student handbooks will be reviewed. Prerequisite: Admission to program and concurrent enrollment in ECHO 112, 125. (SCC)

ECHO 112 — Vascular Fundamentals (4 cr)
This course is an introduction to basic vascular anatomy of the lower and upper extremities, abdomen, visceral organs and cerebral vasculature with emphasis on the physiology of these systems. An introduction to the concepts essential for the performance and interpretation of vascular exams is also included. Laboratory experience is required. Prerequisite: Admission to program and concurrent enrollment in ECHO 100, 125. (SCC)

ECHO 122 — Vascular Procedures I (4 cr)
This course introduces students to the basic vascular procedures used to assess the lower and upper extremities, abdomen, visceral organs and cerebral vasculature with emphasis on the ultrasonic examinations of these systems. Instrumentation commonly used in the vascular laboratory is also presented. Laboratory experiences are required. Prerequisite: Admission to program and concurrent enrollment in ECHO 135. (SCC)

ECHO 125 — Ultrasound Physics and Instrumentation I (5 cr)
This course emphasizes ultrasound physics, the physics of waves, sound transmission, attenuation, pulse wave principles, transducer and ultrasound systems operations. Prerequisite: Admission to program and concurrent enrollment in ECHO 100, 112. (SCC)

ECHO 131 — Core Concepts in Echo Vasc (2 cr)
The core concepts in cardiac and vascular imaging will be explored. Applications of blood flow and hemodynamic analysis using Doppler and imaging technologies. Review of current literature and standards documents will be conducted. Prerequisite: Admission to program and concurrent enrollment in ECHO 132, 133, 138. (SCC)

ECHO 132 — Vascular Procedures II (5 cr)
This course introduces students to the basic vascular physiology of the lower and upper extremities, abdomen, visceral organs and cerebral vasculature with emphasis on homeostatis and normal/abnormal physiology of these systems. Laboratory experiences will be optional. Prerequisite: Admission to program and concurrent enrollment in ECHO 131, 133, 138. (SCC)

ECHO 133 — Echo Fundamentals (5 cr)
Introduction to the basic principles and application of the Doppler and echocardiographic procedures. The anatomy, image assessment, hemodynamics and clinical applications of cardiac ultrasound are emphasized. Laboratory experiences are provided. Prerequisite: Admission to program and concurrent enrollment in ECHO 131, 132, 138. (SCC)

ECHO 135 — Ultrasound Physics and Instrumentation II (5 cr)
This course is a continuation of the concepts introduced in ECHO 125. Ultrasound physics emphasizes the Doppler techniques, artifacts, bio utilizing instrumentation to investigate the principles of Doppler techniques and artifacts. Prerequisite: Admission to program and concurrent enrollment in ECHO 122. (SCC)

ECHO 138 — Cardiovascular Physiology (4 cr)
This course is an advanced study of normal cardiovascular physiology presented in a series of physician lectures and lab demonstrations with applications in invasive and noninvasive cardiology. Prerequisite: BIOL& 241, 242 (formerly A-P 242, 243). Admission to program and concurrent enrollment in ECHO 131, 132, 133. (SCC)

ECHO 141 — Data Collection and Presentation (3 cr)
Students explore applications in medicine and develop the ability to use the microprocessor for word processing database management and statistical analysis. Principles of statistics are reviewed and applied through database management. Prerequisite: Admission to program and concurrent enrollment in ECHO 142, 143. (SCC)

ECHO 142 — Echo Clinical Preparation (4 cr)
Students develop basic imaging skills by imaging normals within the SCC echocardiography laboratory. Clinical requirements are discussed and defined. The role and job description of the noninvasive cardiovascular technologist are evaluated. Prerequisite: Admission to program and concurrent enrollment in ECHO 141, 143. (SCC)

ECHO 143 — Echo Clinical I (6 cr)
Students spend four weeks in a clinical setting. Two weeks are spent in an echocardiography laboratory assisting staff in patient preparation; imaging time is provided when appropriate. Two weeks are spent in a noninvasive electrophysiology laboratory performing ECGs, exercise tolerance testing, Holter monitoring and pacemaker checks under the direction of a staff technologist. Weekly clinical seminars are conducted with SCC staff. A clinical consciousness is developed with emphasis on professionalism, clinical rapport, medical ethics and patient care. Prerequisite: Admission to program and concurrent enrollment in ECHO 141, 142. (SCC)

ECHO 251 — Echocardiography Clinical II (6 cr)
Students obtain hands-on experience in hospital and clinical environments. Development of clinical technique in the utilization of current echocardiographic instrumentation in the evaluation of acquired cardiovascular disease is emphasized. Students apply the principles of medical legal ethics and professionalism to the patient, physician and other members of the health team. Clinical case reports are required. Prerequisite: Admission to program and concurrent enrollment in ECHO 253. (SCC)

ECHO 253 — Echocardiography I (7 cr)
This course will utilize the fundamentals presented in the first year of noninvasive cardiovascular technology to evaluate acquired cardiovascular disease states. This course will emphasis the evaluation and interpretation of the Doppler and 2D Echo examinations. Prerequisite: Admission to program and concurrent enrollment in ECHO 251, 254. (SCC)

ECHO 254 — Technical Skills Echocardiography I (3 cr)
The student will develop basic skills in performing the Doppler Echo examination on student volunteers. All procedures are performed under the supervision of credentialed cardiac sonographers. Prerequisite: Admission to program and concurrent enrollment in ECHO 253. (SCC)

ECHO 261 — Echocardiography Clinical III (6 cr)
Students utilize the skills learned in NCT 251 and obtain advanced experience in hospital and clinical environments. Development of clinical technique in the utilization of current echocardiographic instrumentation in the evaluation of acquired cardiovascular disease is emphasized. Students apply the principles of medical legal ethics and professionalism to the patient, physician and other members of the health team. Clinical case reports are required. Prerequisite: Admission to program and concurrent enrollment in ECHO 263. (SCC)

ECHO 263 — Echocardiography II (7 cr)
A continued study of cardiac noninvasive diagnostics with emphasis on the new developments and specialty applications. This course includes the echocardiographic approach to congenital heart disease. Physician lectures are utilized. Students will present registry review topics. Statistics and research methods are utilized. Prerequisite: Admission to program and concurrent enrollment in ECHO 261. (SCC)

ECHO 264 — Technical Skills Echo II (3 cr)
A continued study of cardiac noninvasive diagnostics with emphasis on the new developments and specialty applications. Laboratory experiences are provided in a clinical simulation format to develop the essential skills in the performance of the Doppler Echo imaging techniques. This course integrates the complete echocardiographic examination utilizing both fundamental and advanced techniques in a clinical simulation environment. Prerequisite: Admission to program and concurrent enrollment in ECHO 263. (SCC)

ECHO 273 — Echocardiography Clinical IV (14 cr)
Students practice clinical skills previously developed through active participation in a noninvasive cardiovascular laboratory. This full-time clinical internship is completed in an affiliated local or out-of-town hospital. Clinical skills necessary to the performance and evaluation of the M-mode, two-dimensional and Doppler Echocardiogram are emphasized. Written reports, review of current literature and attendance at conferences are required. Prerequisite: Admission to program. (SCC)

ECONOMICS

ECON 100 — Fundamentals of Economics (5 cr)
A general introduction covering microeconomics (small sections of the economy), macroeconomics (economic system as a whole) and comparative economic systems. Students who plan to enroll in ECON& 201 or ECON& 202 should not enroll in ECON 100. (SCC, SFCC)

ECON& 201 — Micro Economics (5 cr)
Students are introduced to American economy with emphasis on prices, taxes, wages, production, farm problems, monopolies, labor, poverty and problems of the world economy. Prerequisite: SFCC only: ECON& 202 is recommended. (SCC, SFCC)

ECON& 202 — Macro Economics (5 cr)
The general introductory course covering the organization, operation and control of the American economy--problems of inflation, unemployment, taxation, public debt, money and banking, business cycles and economic growth. Capitalism compared with communism and socialism. (SCC, SFCC)

EDUCATION/EDUCATION PARAPROFESSIONAL, SPECIAL EDUCATION

EDUC 100 — Exploring Teaching (5 cr)
This course focuses on personal qualities of teachers, the changing face of education, learning theories, teaching methods, classroom management and career planning. Observations in educational settings occur to identify differences in grade levels, child development, and teaching styles. In addition, practical, hands-on experiences are incorporated to complement academic training. (SCC, SFCC)

EDUC& 202 — Intro to Education (5 cr)
An orientation course designed to help the student--through an analysis of current educational issues--make a determination as to whether he or she should enter the field of teaching. (SCC, SFCC)

EDUC& 204 — Exceptional Child (5 cr)
This course introduces students to various categories of disabilities, legal and historical foundations for special education services, as well as opportunities to design and access educational resources for exceptional students from infancy to adulthood, within a community of collaboration and inclusion. (SCC, SFCC)

EDUC& 205 — Intro to Ed w/ Field Exp (5 cr)
This course explores the past, present and future of education in both theory and practice. For the students considering a career in education, this course examines historical, social, legal and philosophical issues as well as learning theory, teaching methods and current issues facing the profession. Students meet three hours per week in class and complete 44 hours of field experience in a school setting. (SFCC)

EDUC 206 — Tutor Training (1 cr)
This course prepares students to provide individual and small group tutoring. It includes the study of methods and materials for tutoring, interpersonal skills, and journaling. Prerequisite: SFCC Only: Permission of instructor. (SCC, SFCC)

EDUC 207 — Advanced Tutor Training (1 cr)
This course prepares students to provide advanced individual and small group tutoring. It includes the study of methods and materials for tutoring, interpersonal skills, and journaling. Prerequisite: EDUC 206 and permission of instructor. (SCC, SFCC)

EDUC 208 — Tutorial Practicum (1-2 cr)
In this course students provide individual and small group tutoring within a supervised work environment of those skills. This course may be repeated. Prerequisite: Concurrent enrollment in EDUC 206 or EDUC 207 and/or permission of instructor. (SCC, SFCC)

EDUC 252 — Social/Emotional Development (5 cr)
This course begins with an orientation to the discipline of social and personality development through research methodologies and classical theories. Early social and emotional development are explored as are topics of the development of self-achievement, gender issues, and aggression and antisocial conduct. We conclude by considering the impact of family as well as extrafamilial influences, such as TV, peers and schools. Theory and research are applied to real life. Prerequisite: EDUC& 204 or permission of instructor. (SFCC)

EDUC 266 — Cooperative Education Seminar (1-2 cr)
For course description, see Cooperative Education. (SCC)

EDUC 267 — Cooperative Education Work Experience (1-18 cr)
For course description, see Cooperative Education. (SCC, SFCC)

EDUC 270 — Introduction to Developmental Disabilities (5 cr)
This course addresses etiology of retardation, unresolved social questions, and problems related to the identification, education and professional/technical training of persons with developmental disabilities. Students are assigned to community agencies where they receive practical experience working with children or adults. Orientation includes current problems and trends in the field of developmental disabilities. Forty-four hours of field experience are required. Prerequisite: EDUC& 204 or permission of instructor. (SFCC)

EDUC 275 — Learning Disabilities (5 cr)
Basic difficulties encountered by children that lead to the label of "learning disabled" are addressed. Perceptual and neurological problems, reading difficulties and other etiological considerations are discussed. Practical classroom suggestions for treatment and remediation of learning disabilities are examined and outlined. Students are assigned to community agencies for practical experience working with children or adults who are experiencing learning problems. Forty-four hours of field experience are required. Prerequisite: EDUC& 204 or permission of instructor. (SFCC)

EDUC 280 — Behavior/Classroom Management (5 cr)
This course provides a forum in which to explore various behavioral prevention and intervention strategies used in the education of children. Through this course students have opportunities to conduct observations, to develop prevention and interventions for specific situations, and to discuss the ethical issues with regard to behavioral support and management. Prerequisite: EDUC& 204 or permission of instructor. (SFCC)

EDUC 281 — Education/Special Education Practicum I (5 cr)
Students are placed in an educational setting commensurate with their intended career goal. Key professional competencies are developed incorporating elements of teaching and learning. Integration of theory and practice is accomplished through practical engagement for 132 hours under close supervision. Prerequisite: Permission of instructor. (SFCC)

EDUC 282 — Education/Special Education Practicum II (5 cr)
Students in the education paraprofessional program are placed in a practicum setting, such as a public school or community service agency, where they have an opportunity to observe and work in settings in accordance with their career direction. Students work under the supervision of a qualified professional. As a culminating experience, students publicly present a capstone project of their own design. Prerequisite: EDUC 281. (SFCC)

ELECTRICAL MAINTENANCE AND AUTOMATION

ELMT 102 — Electrical Basics (6 cr)
Students are introduced to the concepts of basic electrical theory, circuitry, meters, and introduction to electrical safety. (SCC)

ELMT 111 — Electrical Math (5 cr)
Concepts of mathematics and their application to the electrical field are presented. Additional areas covered include Ohm's Law, the metric system, algebraic formulas and trigonometry. (SCC)

ELMT 112 — Electrical Theory (5 cr)
Students study matter, atomic structure, electron theory, sources of electricity and magnetism. Prerequisite: ELMT 111 or MATH 096 or permission of instructor. (SCC)

ELMT 113 — Safety and Tools (4 cr)
A theoretical and practical study and its application to the electrical field is presented. This course provides general safety concepts to be applied when working with electric circuits, as well as job safety concepts. (SCC)

ELMT 114 — Materials and Fasteners (4 cr)
Students learn to identify electrical materials and their applications. In addition, students classify, grade and use fasteners, such as bolts, screws, and rivets. Proper torque values are explained. (SCC)

ELMT 122 — DC Circuits (1-5 cr)
Theory and shop application in Ohm's Law, voltage, current, resistance, and power in series, parallel and series-parallel direct current circuits are presented in this course. Prerequisite: ELMT 112 or permission of instructor. (SCC)

ELMT 123 — AC Theory (5 cr)
Students analyze AC series, parallel, and combination circuits with resistance, inductance and capacitive elements using mathematics, measuring devices and other test equipment. Prerequisite: ELMT 122 or permission of instructor. (SCC)

ELMT 124 — Motor Maintenance (2-5 cr)
Students learn to perform the mechanical disassembly, assembly, and/or inspection of bearings, commutators, slip rings, brushes and insulation found in small and medium-sized motors. (SCC)

ELMT 131 — Solid State (2-5 cr)
This course introduces the study of theory and operation of solid state devices such as diodes, transistors, triacs and SCRs. Prerequisite: ELMT 123. (SCC)

ELMT 132 — DC Generators and Motors (1-5 cr)
Theory, design, application and testing of direct current (DC) motors and generators are presented in this course. The teardown and reassembly of DC generators also are included. Prerequisite: ELMT 122. (SCC)

ELMT 133 — AC Motors and Alternators (4 cr)
Theory, design, application and testing of alternating current (AC) motors; single- and three-phase generation of alternating current (single-and poly-phase); paralleling alternators and calculating load and power factor characteristics under various load conditions are presented. Prerequisite: ELMT 123 or permission of instructor. (SCC)

ELMT 134 — Introduction to AC Controls (5 cr)
This course introduces pilot devices, wiring diagrams and basic motor circuits. Areas of emphasis include overload, hand-off automatic and parallel stop-start controls. The wiring and troubleshooting of various motor control circuits also are introduced. (SCC)

ELMT 135 — DC Motor Controls (4 cr)
Students study DC motor control devices such as manual starting rheostats, reduced voltage starting, braking and speed control. The development of ladder diagrams to NFPA standards is addressed. Prerequisite: ELMT 132. (SCC)

ELMT 241 — AC Motor Controls (5 cr)
This course continues with the concepts introduced in ELMT 134 with emphasis on pilot devices, timing circuits, control voltage, ladder diagrams and sensors. Wiring and troubleshooting of various motor control circuits also are included. Prerequisite: ELMT 134. (SCC)

ELMT 242 — Advanced AC Controls (5 cr)
This course is a continuation of the concepts introduced in ELMT 134 and 241 with emphasis on forward and reversing, motor deceleration and braking, advanced timing circuits, and basic sequence control. The wiring and troubleshooting of various motor control circuits also are included. Prerequisite: ELMT 241 or permission of instructor. (SCC)

ELMT 243 — Introduction to Programmable Controllers (4 cr)
This course is an introduction to programmable controllers, hardware, programming fundamentals, numbering systems, memory organization and peripheral devices. Prerequisite: ELMT 134 or permission of instructor. (SCC)

ELMT 244 — Solid State Motor Controls (4 cr)
This course includes the theory of operation, testing and programming of solid-state starters, and DC and AC variable frequency drives. Students use test equipment and manuals including digital volt meters and oscilloscopes. Prerequisite: ELMT 131, 134 or permission of instructor. (SCC)

ELMT 251 — National Electric Code (4 cr)
The National Electrical Code and its application to the safe installation of electrical conductors and equipment is explained in this course. (SCC)

ELMT 252 — Transformers and Industrial Lighting (5 cr)
This course is a comprehensive study of the theory and operation of transformers and industrial lighting. The functions of various types of transformers and the maintenance and repair of industrial lighting systems are emphasized. Students perform the actual hookup and testing of basic single-phase and three-phase transformer connections, observe and demonstrate proper safety and maintenance techniques, and develop service wiring skills. Prerequisite: ELMT 123 or permission of instructor. (SCC)

ELMT 253 — National Electric Code - Article 430 (1-5 cr)
This course offers an in-depth study of Article 430 of the National Electrical Code and its application to motors, motor circuits and controllers. (SCC)

ELMT 254 — Programmable Controller Applications (5 cr)
Practical experience in programming circuits using relay type instructions, timers, counters, data manipulation, arithmetic functions and other advanced techniques is offered in this class. Prerequisite: ELMT 244 or permission of instructor. (SCC)

ELMT 262 — Raceways (1-5 cr)
This course provides practical shop experience in the bending of conduit using hand, mechanical and hydraulic benders. Prerequisite: ELMT 111 or MATH 096 or permission of instructor. (SCC)

ELMT 263 — Wiring Techniques (4 cr)
Students are offered actual lab experience in project layout, support and installation of electrical systems. (SCC)

ELMT 264 — Special Circuits (5 cr)
This course offers practical applications on the development of complex controls in machine sequence or process systems. (SCC)

ELMT 265 — Advanced Programmable Controllers (1-5 cr)
This course is an introduction to the concepts of analog input/output devices, motion control, vision basics, networking programmable controllers, software installation and graphical man/machine interfaces. Practical experience applying this information to motor control is emphasized. Prerequisite: ELMT 254 or permission of instructor. (SCC)

ELMT 266 — Cooperative Education Seminar (1-2 cr)
For course description, see Cooperative Education. (SCC)

ELMT 267 — Cooperative Education Work Experience (1-16 cr)
For course description, see Cooperative Education. (SCC)

ELMT 268 — Programmable Controller Integration (1-5 cr)
This course provides practical experience in industrial process control applications and hardware, plant floor communication networks, and operator interface devices. Prerequisite: ELMT 265. (SCC)

ELMT 288 — Cooperative Education Work Experience (No Seminar) (1-18 cr)
For course description, see Cooperative Education. (SCC)

ELECTRONICS ENGINEERING TECHNICIAN

ELECT 110 — Computer Fundamentals for Electronics (2 cr)
Students are introduced to the basics of the Microsoft Disk Operating System (DOS), word processing, keyboarding skills and various applications for the electronics industry. Prerequisite: Concurrent enrollment in ELECT 111, 112, 113. (SCC)

ELECT 111 — DC Circuits (7 cr)
Students are introduced to DC circuits including resistors and resistive circuits, series and parallel circuits, meter movements, ammeters, voltmeters, VOMs, DMMs and Wheatstone Bridges. (SCC)

ELECT 112 — DC Circuit Lab (5 cr)
This course presents DC circuits lab applications including resistors and resistive circuits, series and parallel circuits, meter movements, ammeters, voltmeters, VOM's, DMM's and Wheatstone Bridges. (SCC)

ELECT 113 — DC/AC Circuit Math (5 cr)
Students review mathematics as it applies to DC/AC circuits and utilize the electronic calculator as a problem solving tool. The use of algebraic equations and trigonometric functions to solve circuit problems are emphasized. (SCC)

ELECT 121 — AC Circuits (9 cr)
This course addresses theory related to AC circuits, capacitors, coils, solid-state diodes, transformers, oscilloscopes, audio generators, and component checkers. Prerequisite: ELECT 111, 112, 113 or department chair approval. (SCC)

ELECT 122 — AC Circuit Lab (5 cr)
This course introduces AC circuit lab applications including capacitors, coils, solid-state diodes, transformers, oscilloscopes, audio generators and component checkers. Prerequisite: ELECT 111, 112, 113 or department chair approval and concurrent enrollment in ELECT 121 or department chair approval. (SCC)

ELECT 123 — Advanced DC/AC Circuit Math (5 cr)
This course is the study and application of algebraic exponents, phasor algebra and logarithms for DC/AC circuits. Prerequisite: ELECT 111, 112, 113 or department approval. (SCC)

ELECT 136 — Solid State Devices/Circuits (5 cr)
Students are introduced to semiconductor devices, their operation and characteristics. (i.e., transistors, diodes, and special devices). Basic power supply circuits also are covered. Prerequisite: ELECT 121, 122, 123 or department chair approval. (SCC)

ELECT 137 — Solid State Devices/Circuits Lab (4 cr)
Students experience a hands-on approach to theories by performing lab assignments pertaining to subjects covered in ELECT 136. Prerequisite: ELECT 121, 122, 123 or department chair approval and concurrent enrollment in ELECT 136 or department chair approval. (SCC)

ELECT 138 — Linear Devices/Circuits (5 cr)
Students are introduced to the characteristics and operation of amplifiers, linear circuits, active filter circuits and specialized circuits such as comparator, integrator and differentiator amplifiers. Prerequisite: ELECT 121, 122, 123 or department chair approval. (SCC)

ELECT 139 — Linear Devices/Circuits Lab (4 cr)
Students experience a hands-on approach to the characteristics and operation of operational amplifiers, linear circuits, active filter circuits and specialized circuits such as comparator, integrator and differentiator amplifiers. Prerequisite: ELECT 121, 122, 123 or department chair approval and concurrent enrollment in ELECT 138 or department chair approval. (SCC)

ELECT 211 — Digital Concepts (5 cr)
Students are introduced to the basic concepts of numbering systems (i.e., binary, octal and hex), digital devices such as gates, counters and flip-flops. An introduction to microprocessors, memory circuits, and microprocessor applications will be covered. General hardware structure, addressing and ASIC's will also be covered. Prerequisite: ELECT 136, 137, 138, 139 or department chair approval and concurrent enrollment in ELECT 212 or department chair approval. (SCC)

ELECT 212 — Digital Concepts Lab (4 cr)
Students experience a hands-on approach to theories by performing lab assignments pertaining to subjects covered in ELECT 211. Prerequisite: ELECT 136, 137, 138, 139 or department chair approval and concurrent enrollment in ELECT 211. (SCC)

ELECT 213 — Basic Computer Systems (5 cr)
Students are introduced to basic computer systems; the motherboard including Bus architecture, BIOS, storage devices, audio/video devices, printing devices, computer power supplies and other I/O devices. Basic peer-to-peer networks are also covered. Prerequisite: ELECT 136, 137, 138, 139 or department chair approval. (SCC)

ELECT 214 — Basic Computer Systems Lab (4 cr)
The course gives the student a hands-on approach to basic computer systems; the motherboard including Bus architecture, BIOS, storage devices, audio/video devices, printing devices, computer power supplies and other I/O devices. Basic peer-to-peer networks are also covered. System maintenance and troubleshooting is emphasized. Prerequisite: ELECT 136, 137, 138, 139 or department chair approval and concurrent enrollment in ELECT 213 or department chair approval. (SCC)

ELECT 221 — Communication Fundamentals (5 cr)
Students are introduced to the basic concepts of communications systems including RF, amplitude modulation (AM), frequency/phase modulation, basic transmitters and receivers. Prerequisite: ELECT 211, 212, 213, 214 or department chair approval. (SCC)

ELECT 222 — Communication Fundamentals Lab (4 cr)
Students experience a hands-on approach to the basic concepts of communications systems including RF, amplitude modulation (AM), frequency/phase modulation, basic transmitters and receivers. Prerequisite: ELECT 211, 212, 213, 214 or department chair approval and concurrent enrollment in ELECT 221 or department chair approval. (SCC)

ELECT 223 — Advanced Computer Systems (5 cr)
This advanced computer course will cover computer operating systems, installation and hardware setup, specialized computer interfacing, digital communications, data transmission, data cabling and computer diagnostics. Prerequisite: ELECT 213, 214 or department chair approval. (SCC)

ELECT 224 — Advanced Computer Systems Lab (4 cr)
Students experience a hands-on approach to computer operating systems, installation and hardware setup, specialized computer interfacing, digital communications, data transmission, data cabling and computer diagnostics. Prerequisite: ELECT 213, 214 or department chair approval and concurrent enrollment in ELECT 223 or department chair approval. (SCC)

ELECT 231 — Advanced Communications (5 cr)
This course covers transmission lines, radio wave propagation, antennas and fiber optics. The utilization of transmission and receiver techniques is emphasized. Prerequisite: ELECT 221, 222 or department chair approval. (SCC)

ELECT 232 — Advanced Communications Lab (4 cr)
Students experience a hands-on approach to theories by performing lab assignments pertaining to subjects covered in ELECT 231. Prerequisite: ELECT 221, 222 or department chair approval and concurrent enrollment in ELECT 231 or department chair approval. (SCC)

ELECT 233 — Systems Troubleshooting (5 cr)
This course covers troubleshooting techniques including system and block concepts, analysis methods, quick failure identification, system checkout procedures and customer/client relations. Prerequisite: ELECT 221, 222, 223, 224 or department chair approval and concurrent enrollment in ELECT 234. (SCC)

ELECT 234 — Systems Troubleshooting Lab (4 cr)
Students experience a hands-on approach to theories by performing lab assignments pertaining to subjects covered in ELECT 233. Prerequisite: ELECT 221, 222, 223, 224 or department chair approval and concurrent enrollment in ELECT 233 or department chair approval. (SCC)

ELECT 245 — Principles of Avionics (5 cr)
Students are introduced to avionics communication, navigation, and flight control systems. Operation and testing using specialized equipment is emphasized. FAA regulations: Parts 43 and 91 as well as FCC requirements are also covered. Prerequisite: Instructor approval and concurrent enrollment in ELECT 246. (SCC)

ELECT 246 — Principles of Avionics Lab (4 cr)
Students experience a hands-on approach to theories by performing lab assignments pertaining to subjects covered in ELECT 245. Operation and testing using specialized equipment is emphasized. Prerequisite: Instructor approval and concurrent enrollment in ELECT 245. (SCC)

ELECT 247 — Avionics Systems (5 cr)
This course covers advanced navigation, flight control, interfacing and troubleshooting systems. FAA required certification testing of transponders, altitude encoders, pitot/static systems and altimeters is also covered. Prerequisite: Instructor permission and concurrent enrollment in ELECT 248. (SCC)

ELECT 248 — Avionics Systems Lab (4 cr)
Students experience a hands-on approach to theories by performing lab assignments pertaining to the subjects covered in ELECT 247. Special emphasis is given to FAA required certification testing of transponders, altitude encoders, pitot/static systems and altimeters. Prerequisite: Instructor permission and concurrent enrollment in ELECT 247. (SCC)

ELECT 250 — Electronics Independent Study (22 cr)
Faculty supervise this independent study to allow students to work in a number of areas in electronics such as digital, instrumentation, communications, etc. Prerequisite: Permission of instructor. (SCC)

ELECT 255 — Digital Data Communications (5 cr)
This course covers digital modulation, multiplexing, digital signal processing, systems and data protocols, network operation, troubleshooting techniques, and security policies. Prerequisite: ELECT 231, 232 or department chair approval and concurrent enrollment in ELECT 256 or department chair approval. (SCC)

ELECT 256 — Digital Data Communications Lab (4 cr)
This course allows students to experience a hands-on approach to theories by performing lab assignments pertaining to subjects covered in ELECT 255. Prerequisite: ELECT 231, 232 or department chair approval and concurrent enrollment in ELECT 255 or department chair approval. (SCC)

ELECT 257 — Wireless Communications (5 cr)
This course covers spread spectrum technologies, troubleshooting wireless local area networks, antenna options, security, system design, and installation standards and regulations. Prerequisite: ELECT 231, 232 or department chair approval and concurrent enrollment in ELECT 258 or department chair approval. (SCC)

ELECT 258 — Wireless Communications Lab (4 cr)
Students experience a hands-on approach to theories by performing lab assignments pertaining to subjects covered in ELECT 257. Prerequisite: ELECT 231, 232 or department chair approval and concurrent enrollment in ELECT 257 or department chair approval. (SCC)

ELECT 266 — Cooperative Education Seminar (1-2 cr)
For course description, see Cooperative Education. (SCC)

ELECT 267 — Cooperative Education Work Experience (1-18 cr)
For course description, see Cooperative Education. (SCC)

ELECT 278 — RF Communications (5 cr)
This course covers FCC rules and regulations; radiation power exposure and safety; and television systems including transmitters, translators and receivers. Prerequisite: ELECT 231, 232 or department chair approval and concurrent enrollment in ELECT 279 or department chair approval. (SCC)

ELECT 279 — RF Communications Lab (4 cr)
Students experience a hands-on approach to theories by performing lab assignments pertaining to subjects covered in ELECT 278. Prerequisite: ELECT 231, 232 or department chair approval and concurrent enrollment in ELECT 278. (SCC)

ELECT 294 — Microwave, CATV, and Satellite Communications (5 cr)
This course covers point-to-point microwave transmitters, receivers, antennas and satellite systems including downlink calculations and evaluations. Prerequisite: ELECT 231, 232 or department chair approval and concurrent enrollment in ELECT 295 or department chair approval. (SCC)

ELECT 295 — Microwave, CATV, and Satellite Communications Lab (4 cr)
Students experience a hands-on approach to theories by performing lab assignments pertaining to subjects covered in ELECT 294. Prerequisite: ELECT 231, 232 or department chair approval and concurrent enrollment in ELECT 294 or department chair approval. (SCC)

EMERGENCY MEDICAL SERVICES

EMS 120 — Basic First Aid in the Workplace (2 cr)
This is a basic first aid course encompassing the following: bleeding control and bandaging; practical methods of artificial respiration including mouth-to-mouth and mouth-to-nose resuscitation; cardiopulmonary resuscitation; poisons, shock, unconsciousness and stroke; burns and scalds, sunstroke, heat exhaustion, frostbite and freezing; strains, sprains and hernias; fractures and dislocations; proper transportation of injured; bites and stings; and subjects covering specific health hazards likely to be encountered by coworkers of first aid students enrolled in the course. (SCC)

EMS 121 — Emergency Management Training for Professionals (3 cr)
This course was designed to meet new accreditation guidelines and requirements for Allied Health and Nursing students. This course will cover First Aid for Professionals, AHA (CPR for Health Care Providers) and Emergency Preparedness and Management for Health Care Professionals. Successful completion of this course will include a First Aid Card and Health Care Provider CPR card. (SCC)

EMS 122 — Basic Wilderness Survival (3 cr)
This course was designed to meet the basic needs of wilderness survival. This course covers the importance of preparation prior to leaving on a wilderness trip. Understanding how the body responds in different environments, with an emphasis on clothing and gear selection. Students will learn how to build and maintain a fire, build a shelter and learn signaling techniques in survival situations. Students will also learn the importance of water and food in survival situations. Prerequisite: Current First Aid Card or be certified as either a First Responder or EMT of any level. (SCC)

EMS 128 — Emergency Medical Technician-Basic Lecture (9 cr)
This course is for students actively involved in providing pre-hospital care and is not intended as a first aid course to the general public. Students learn to recognize the nature and seriousness of a patient's injury, assess the need for emergency medical care; and administer medical care that may include lifting, moving and positioning the patient to minimize discomfort and prevent further injury safely and effectively. The course meets the NHTSA, Washington State and National Registry for EMT requirements for certification as an EMT-Basic. Prerequisite: 18 years of age, high school diploma or GED certificate, AHA Healthcare Provider or ARC CPR for the Professional Rescuer, and the physical strength to perform normal functions of an EMT-Basic. Students are not eligible for certification until they become a functioning member of a state recognized affiliated EMS providing agency. (SCC)

EMS 129 — Emergency Medical Technician-Basic (3.1 cr)
This course is for students actively involved in providing pre-hospital care and is not intended as a first aid course to the general public. Students learn to recognize the nature and seriousness of a patient's injury, assess the need for emergency medical care; and administer medical care that may include lifting, moving and positioning the patient to minimize discomfort and prevent further injury safely and effectively. The course meets the NHTSA, Washington State and National Registry for EMT requirements for certification as an EMT-Basic. Prerequisite: 18 years of age, high school diploma or GED certificate, AHA Healthcare Provider or ARC CPR for the Professional Rescuer, and the physical strength to perform normal functions of an EMT-Basic. Students are not eligible for certification until they become a functioning member of a state recognized affiliated EMS providing agency. (SCC)

EMS 200 — Introduction to Paramedicine (3 cr)
This course prepares students for certification as EMT-P. Students are presented with a solid base of education regarding the paramedic's roles and responsibilities, and the medical/legal issues that apply to the profession. Prerequisite: BIOL& 160, 241, 242 and current Emergency Medical Technician Certification. Admission to the program. (SCC)

EMS 202 — Medical Communication and Documentation (3 cr)
This course describes the appropriate communication and documentation techniques to be used within the EMS Profession with differentiation between medical professionals and the lay public. Instruction will include communication techniques specific to the profession as well as terminology and styles for communication. Prerequisite: Permission of the instructor. (SCC)

EMS 206 — General Pharmacology (3 cr)
This course introduces students to paramedic pharmacology and certification as EMT-P. Students are presented with a solid base of education regarding the paramedic's rules and responsibilities and the medical/legal issues that apply to patient assessment. Prerequisite: BIOL& 160, 241, 242 and current Emergency Medical Technician Certification. Admission to the program. (SCC)

EMS 208 — Patient Assessment (3 cr)
This course introduces students to paramedic pharmacology and certification as EMT-P. Students are presented with a solid base of education regarding the paramedic's rules and responsibilities and the medical/legal issues that apply to patient assessments, proper communication and documentation techniques. Prerequisite: BIOL& 160, 241, 242 and current Emergency Medical Technician Certification. Admission to the program. (SCC)

EMS 210 — General Medicine I (3 cr)
This course introduces students to paramedic topics in general medicine. Prerequisite: Successful completion of prior program course work and permission of the instructor. (SCC)

EMS 212 — General Cardiology (3 cr)
This course prepares students for certification as EMT-P. Extensive coverage of the cardiovascular system, its disease process and the treatment is emphasized. Prerequisite: Successful completion of prior program course work and permission of the instructor. (SCC)

EMS 214 — General Traumatology (3 cr)
This course prepares students for certification as EMT-P. Students are introduced to pharmacology, its applications and the role it plays in the treatment of injured patients. Prerequisite: Successful completion of prior program course work and permission of the instructor. (SCC)

EMS 220 — General Medicine II (3 cr)
This course continues studies on paramedic topics in general medicine. Prerequisite: Successful completion of prior program course work and permission of the instructor. (SCC)

EMS 222 — Life Span Medicine (3 cr)
This course introduces students to differences in medicine applied throughout the life span from pediatrics to geriatrics. Prerequisite: Successful completion of prior program course work and permission of the instructor. (SCC)

EMS 224 — Paramedic Operations (3 cr)
This course introduces students to paramedic operational support. Prerequisite: Successful completion of prior program course work and permission of the instructor. (SCC)

EMS 230 — Special Topics In Paramedicine (3 cr)
Student are provided a variety of pertinent, current Emergency Medical Technician (Paramedic) topics. Course content varies depending upon the topics chosen. Prerequisite: Successful completion of prior program course work and permission of the instructor. (SCC)

EMS 240 — Paramedic Skills Lab I (2 cr)
This course prepares students for certification as EMT-P. The application of various types of intravenous access are introduced. Issues of hemorrhage and shock including numerous types and forms of trauma such as musculoskeletal trauma, soft tissue injuries, burns, head and face trauma, thoracic, abdominal and spinal trauma are emphasized. Prerequisite: BIOL& 160, 241, 242 and current Emergency Medical Technician Certification. Admission to the program. (SCC)

EMS 242 — Paramedic Skills Lab II (2 cr)
This course continues studies in paramedic skills in the laboratory. Prerequisite: Successful completion of prior program course work and permission of the instructor. (SCC)

EMS 244 — Paramedic Skills Lab III (2 cr)
This course continues instruction on paramedic skills in the laboratory. Prerequisite: Successful completion of prior program course work and permission of the instructor. (SCC)

EMS 250 — Paramedic Clinical I (4 cr)
Students are introduced to the clinical environment by spending four weeks in the clinical setting under the direction of a staff Emergency Medical Technician (Paramedic). Weekly clinical seminars are conducted with faculty. A clinical consciousness is developed with emphasis on professionalism, clinical rapport, medical ethics and patient care. Prerequisite: Successful completion of prior program course work and permission of the instructor. (SCC)

EMS 252 — Paramedic Clinical II (4 cr)
This course provides hands-on experience in the hospital and clinical environment. Emphasis is placed on the development of clinical techniques in the emergency department; obstetrics; pediatrics and ICU units. Student then apply the principles of principles of medical legal ethics and professionalism to the patient, physicians and other members of the health team. Clinical case reports are required. Prerequisite: Successful completion of prior program course work and permission of the instructor. (SCC)

EMS 260 — Paramedic Internship I (5 cr)
This course incorporates all of the previous courses into clinical experience for students in the pre-hospital environment. Students spend time with emergency medical service providers practicing and refining the skills acquired during the earlier training medical incident classes. Additional education in related fields including air-operations, medical incident command, rescue awareness, crime scenes and hazardous materials is emphasized. Prerequisite: Successful completion of prior program course work and permission of the instructor. (SCC)

EMS 262 — Paramedic Internship II (5 cr)
This course continues to incorporate all of the previous courses into clinical experience for students in the pre-hospital environment. Students spend time with emergency medical service providers practicing and refining the skills acquired during the earlier training medical incident classes. Additional education in related fields including air-operations, medical incident command, rescue awareness, crime scenes and hazardous materials is emphasized. Prerequisite: Successful completion of prior program course work and permission of the instructor. (SCC)

ENGINEERING

ENGR 103 — Engineering Graphics/CAD (5 cr)
This is a basic graphics course for engineers using manual and computer-aided (CAD) methods. The course emphasizes visualization, spatial relations and design. Multiview working drawings and 3-D pictorial drawings are combined into a design project at course conclusion. Descriptive geometry principles are studied for graphical problem solving, as well as CAD solids modeling. Prerequisite: MATH 099. (SFCC)

ENGR 110 — Engineering Problems and Orientation (3 cr)
This course is an introduction to the world of engineering. It also is an orientation for students who have an interest in engineering but know little about the various disciplines or functional areas. Simple application problems in mechanics, thermal and electrical sciences, and fluids are examined to give students an appreciation for these subjects. There also is an introduction to the personal computer in engineering work. Prerequisite: MATH 099. (SFCC)

ENGR 111 — Engineering Projects (2 cr)
This is a project course that complements ENGR 110. Students work in teams to design and/or build an object. Robots, 3D CAD and creative devices can be used. Prerequisite: ENGR 110 or concurrent enrollment in ENGR 110. (SFCC)

ENGR 120 — Introduction to Engineering Computation (2 cr)
Introduction to modern engineering computing as applied to problems in engineering, mathematics, and science. Introductory instruction using MATLAB software with topics including array and matrix manipulation, functions, graphical analysis, and basic script programming. Prerequisite: MATH& 141. (SFCC)

ENGR 190 — Electronic Logic (5 cr)
The operation and use of linear and digital circuits normally used in and with micro- and minicomputers. Use of system and logic design; build and test typical circuits using TTL logic. Prerequisite: Basic electronics courses with permission of instructor. (SFCC)

ENGR 201 — Statics (5 cr)
A fundamental course in engineering mechanics for particles and rigid bodies in equilibrium. Problems in two and three dimensions using both scalar and vector algebra methods. Prerequisite: MATH& 152 and concurrent enrollment in PHYS 201. (SFCC)

ENGR 202 — Dynamics (5 cr)
Fundamental course in engineering mechanics for particles and rigid bodies experiencing acceleration. Students study unbalanced forces and torques acting on bodies, and the resulting motion using scalar and vector algebraic methods. Prerequisite: ENGR 201. (SFCC)

ENGR 203 — Mechanics of Materials (5 cr)
The study of internal stresses, strains, and deformations of structural members and parts resulting from externally applied loads. Covers design criteria for beams, columns, pressure vessels, bolts, shafts, etc. Prerequisite: ENGR 201. (SFCC)

ENGR 210 — Electric Circuit Theory (5 cr)
A first course in elementary linear circuit analysis for the electrical sciences designed for electrical engineers. Circuit analysis laws, theorems and reduction techniques are studied for first- and second-order circuits. These circuits contain dependent sources and multiple configurations of capacitors and inductors. A weekly lab complements the class lectures. Prerequisite: MATH& 153, 274 (may be taken concurrently), PHYS 202. (SFCC)

ENGR 240 — Applied Numerical Methods for Engineers (3 cr)
Numerical solutions to engineering problems using modern scientific computing tools. Application of mathematical judgment in selecting computational algorithms and communicating results. Prerequisite: ENGR 120 and concurrent enrollment in MATH& 153. (SFCC)

ENGLISH

ENGL 050 — ESL Writing (5 cr)
This course is for ESL students at the low-intermediate level whose writing skills require additional preparation before entering ENGL 061 or ENGL 071. Emphasis is on writing compound and complex sentences. The course provides strategies for developing vocabulary and applying the rules of grammar and punctuation to English sentences. (SFCC)

ENGL 051 — Basic Reading Skills (3 cr)
Small group or individual help in the basic skills of reading. Non-transferable. (SCC)

ENGL 052 — ESL Reading (5 cr)
This course is for ESL students at the low-intermediate level whose reading skills require additional practice before entering ENGL 062 or ENGL 072. Students work on vocabulary development and improving reading comprehension. (SFCC)

ENGL 053 — ESL Listening and Speaking (5 cr)
This course is for ESL students at the low-intermediate level whose reading skills require additional practice before entering ENGL 062 or ENGL 072. Students work on vocabulary development and improving reading comprehension. (SFCC)

ENGL 061 — ESL Writing (5 cr)
This course is for ESL students at the intermediate level whose writing skills require additional preparation before entering ENGL 071 or ENGL 081. It provides strategies for developing vocabulary, applying the rule of grammar and punctuation, writing compound and complex sentences, and composing basic paragraphs. (SFCC)

ENGL 062 — ESL Reading (5 cr)
This course is for ESL students at the intermediate level whose reading skills require additional practice before entering ENGL 072 or ENGL 082. Students work on vocabulary development and improving reading fluency and comprehension. (SFCC)

ENGL 063 — ESL Listening and Speaking (5 cr)
This course is for ESL students at the intermediate level whose listening and speaking skills require additional practice before entering ENGL 073 or ENGL 083. Students work on listening, speaking and interaction skills necessary for communicating in an academic environment. Emphasis is on experiential learning. Students are given opportunities to develop language competence by participating in various classroom, college and community activities. (SFCC)

ENGL 071 — ESL Writing (5 cr)
This course prepares ESL (English as a second language) students for college-level writing tasks. The course helps prepare students to write a variety of coherent, well-developed paragraphs and increases the student's fluency and independence in writing. Prerequisite: TOEFL score of 440 or demonstration of the same by written essay. (SFCC)

ENGL 072 — ESL Reading (5 cr)
This course prepares ESL (English as a second language) students for college-level reading and study tasks. Students concentrate both on learning and applying the skills needed for comprehending various types of required college reading and learn the study strategies to prepare them for college success. Prerequisite: TOEFL score of 440 or demonstration of the same by written essay. (SFCC)

ENGL 073 — ESL Listening and Speaking (5 cr)
This course prepares ESL (English as a second language) students with the oral communication skills and listening comprehension strategies needed both for communicating with and understanding others in an academic environment. Prerequisite: TOEFL score of 440 or demonstration of the same by written essay. (SFCC)

ENGL 081 — ESL Writing (5 cr)
This course is designed for the ESL (English as a second language) student whose writing skills require additional preparation before entering ENGL 099 or ENGL& 101. (SCC, SFCC)

ENGL 082 — Reading and Study Skills for the ENS (English for the Non-native Speaker) (5 cr)
This course is designed to increase the confidence and success of the non-native speaker of English in college-level courses. The course focuses on developing reading, study and testing strategies. (SCC, SFCC)

ENGL 083 — ESL Conversation (5 cr)
This course is designed to increase the ESL (English as a second language) student's ability to understand and use both written and spoken American English at the college level. (SCC, SFCC)

ENGL 090 — Reading and Study Skills (2 cr)
Designed for the slightly below average to better readers to prepare for academic work in the trade and industrial areas. (SCC)

ENGL 091 — Writing Workshop (2 cr)
Designed to further the technical writing skills of students enrolled in trade and industrial programs. (SCC)

ENGL 092 — Communication for International Students (1-5 cr)
A class designed to improve the basic language skills (reading, writing, study skills, pronunciation, conversation) of international students who plan to enroll in college level vocational or academic courses. The curriculum is designed to help those students improve their communication skills so that they can successfully participate in more advanced courses. Students who need additional instruction may have follow-through programs designed for them in the Learning Center. (SCC)

ENGL 093 — Individualized Study Skills (1-5 cr)
This course sharpens students' skills in textbook study, note taking and time management as well as in memory improvement and general classroom survival skills. It may not be taken simultaneously with ENGL 094 or ENGL 151. Students can enroll in the same lab course no more than three quarters regardless of the number of hours for which they enroll. Grading option: Pass/fail. (SCC, SFCC)

ENGL 094 — Study Skills (5 cr)
This course sharpens students' skills in textbook study, note taking and time management as well as in memory improvement, reading comprehension and classroom survival skills. Students also may be introduced to methods which increase reading rates and develop vocabulary. (SCC, SFCC)

ENGL 095 — Reading Lab (1-5 cr)
This course improves students' reading skills through programs that include vocabulary, rate increase, comprehension or study skills. Students can enroll in the same lab course no more than three quarters regardless of the number of hours for which they enroll. Grading option: Pass/fail. (SCC, SFCC)

ENGL 096 — Reading Improvement (3-5 cr)
This course is for the average and better reader to work on these skills: Reading comprehension, summary writing, rapid reading, skimming and scanning. Prerequisite: Score at or above the 25 percentile on the assessment reading test. (SCC, SFCC)

ENGL 097 — Basic Writing: From Sentence to Paragraph (5 cr)
This course provides students with the basic elements of grammar and punctuation as they relate to writing complete and accurately punctuated English sentences. The course attends to grammar, ranging from prepositional phrases to independent and dependent clauses to the recognition and proper punctuation of sentence elements. Formal writing tasks include recognition of boundaries and composing basic paragraphs. (SCC, SFCC)

ENGL 098 — Writing Lab (1-5 cr)
This course offers students individually tailored composition skills through work on paragraphs and essays, sentence structure and mechanics. It is offered in either lecture or lab mode. In the lab mode, the content moves from the paragraph to the essay with emphasis on structure and mechanics, and students earn 5 credits. Students may enroll in the same lab course no more than three quarters regardless of the number of hours for which they enroll. Grading option: Pass/fail. (SCC, SFCC)

ENGL 099 — Improvement of Writing (5 cr)
Students review paragraph development and write several essays. Principles governing sentence structure and punctuation are emphasized. This course may be taken twice for credit. Prerequisite: 2.0 grade in ENGL 097, appropriate placement score, or permission of instructor. (SCC, SFCC)

ENGL 100 — Composition Preparation (5 cr)
This course focuses on remediation of expository skills, reading and incorporating those readings into compositions. This course serves as a "bridge" between English 099 and 101. Prerequisite: ASSET scores or instructor referral. (SCC)

ENGL& 101 — English Composition I (5 cr)
This course develops and sharpens the basic principles of writing college-level essays. Students work on a series of essays to improve their ability to write clear, detailed prose and to use texts to support their claims. Competence in mechanics and standard English usage is assumed of all students taking ENGL& 101. Prerequisite: Either completion of ENGL 099 with a P or a 2.0 or higher, or appropriate placement score(s). (SCC, SFCC)

ENGL& 102 — Composition II (5 cr)
This course teaches students research skills by emphasizing the development of critical reading habits, investigative proficiency, and the writing of expository and persuasive prose including documented research essays. Students work to understand academic audiences, increase their clarity and objectivity, and adhere to standard formats. Prerequisite: ENGL& 101 with a 2.0 or better. (SCC, SFCC)

ENGL 104 — Grammar and Punctuation (3 cr)
Students review the traditional principles of grammar and punctuation and apply these principles. Prerequisite: Concurrent enrollment in ENGL& 101 or permission of instructor. (SCC, SFCC)

ENGL 105 — Pro/Tech: Basic Writing (5 cr)
This course develops and sharpens technical writing skills for competency in the professional arena. Students review basic components of clear, grammatically correct sentences, unified paragraphs and organized lists. They also develop strategies for information design. Assignment formats include writing for web pages, summaries, proposals, definitions, descriptions, promotional copy, resumes and professional correspondence. Students are expected to approach writing as a process: Drafting, revising, editing and proofreading. Whenever possible, assignments address topics pertinent to their technical fields. Prerequisite: ENGL 099 or permission of instructor. (SFCC)

ENGL 110 — Term Paper Workshop (2 cr)
Formulation, organization and presentation of a term or research paper; major mechanical aspects of paper development, including source guidelines, location and survey of materials, source citations, outlining and final format preparation. Prerequisite: Concurrent enrollment in a course other than ENGL& 102 and ENGL& 235. (SCC)

ENGL& 111 — Intro to Literature (5 cr)
Students read and discuss short stories, plays and poetry with an emphasis on better understanding and appreciation of literature. Prerequisite: SFCC only: Recommended minimum reading placement score: COMPASS 80, ASSET 40. (SCC, SFCC)

ENGL& 112 — Intro to Fiction (5 cr)
Students analyze, discuss and write about classic and contemporary fiction, both short stories and a novel. Emphasis is on perceiving the techniques writers use to create an aesthetic experience for readers. Although a historical approach is not used, appropriate background is presented to enrich students' experience of the works. Prerequisite: ENGL& 101 with a 2.0 or better or permission of instructor. SFCC recommended minimum reading placement score: COMPASS 80, ASSET 40. (SCC, SFCC)

ENGL& 113 — Intro to Poetry (5 cr)
This course is a literary study of poetry which explores the themes, the craft and the history of the genre. Students analyze, discuss and write about a diverse selection of poems which offer a variety of experiences. Emphasis is on understanding the way poets manipulate language to create meaning. Prerequisite: ENGL& 101 with a 2.0 or better, or permission of instructor. SFCC only: Recommended minimum reading placement score: COMPASS 80, ASSET 40. (SCC, SFCC)

ENGL& 114 — Intro to Drama (5 cr)
This course is a literary study of dramatic literature, exploring the major themes, conventions and historical trends of drama from ancient Greece to the present. Students analyze, discuss and write about a diverse selection of plays which offer a variety of cultural experiences. Prerequisite: ENGL& 101 or permission of instructor. SFCC only: Recommended minimum reading placement score: COMPASS 80, ASSET 40. (SCC, SFCC)

ENGL 120 — Applied Technical Writing for Vocations (3-5 cr)
Presentation of advanced technical writing forms with written assignments selected by vocational faculty from a menu, including such topics as: Short forms (catalog searches, requisitions, memorandums, etc.); technical reports; job search exercises; the proper use of graphics; research skills; revision skills. Prerequisite: ENGL 189 with a 2.0 or better, or permission of English department chair. (SCC)

ENGL 150 — Academic Communication Skills for International Students (5 cr)
This advanced course is offered for students whose native languages are not English. Students learn and practice intensified reading and study strategies as well as other communication skills necessary for academic success. Prerequisite: Placement through assessment, permission of international student program adviser or permission of instructor. (SFCC)

ENGL 151 — College Reading and Study Skills (5 cr)
Students learn strategies to become independent learners and critical thinkers. Emphasis is on understanding how memory works and improving note taking, test taking, textbook reading, time management and vocabulary. The course cannot be taken simultaneously with ENGL 093 or ENGL 094. Prerequisite: Recommended placement score: COMPASS 80 or above, ASSET 41 or above. (SCC, SFCC)

ENGL 152 — Reading Rate Improvement (2 cr)
This course is for students who read at the college level, and aims to increase dramatically their reading speed on average-difficulty, college-level material without loss of comprehension. Students learn skimming, scanning and rapid reading techniques. Prerequisite: Students must score at college reading level on the COMPASS test or receive permission of the Communications Learning Center director or course instructor. (SCC, SFCC)

ENGL 153 — Vocabulary Development (5 cr)
The class will be a lecture/discussion class with regular assignments, tests and quizzes. Major topics covered include the history of the English language, basic vocabulary tools, language diversity and vocabulary development strategies. Emphasis is placed on the mastery of major affixes and roots in the language. (SCC)

ENGL 157 — Using Study Systems: Before, During, and After Reading (2 cr)
Designed to be linked to a content area course, this course examines effective before, during and after reading strategies for content-area course textbooks. Students will learn to develop and use a personal study system incorporating principles of time management. Recommended COMPASS reading placement of 80 and above, ASSET score of 40 and above. This course cannot be taken simultaneously with ENGL 093 or ENGL 094. Credit will not be granted for both ENGL 151 and ENGL 157. Prerequisite: Recommended placement score of 80 or above on the COMPASS test. (SFCC)

ENGL 188 — Introduction to Writing for Vocational Students (1-3 cr)
This course provides instruction in the fundamentals of writing (basic grammar, sentence structure, punctuation, spelling and organization). Students learn to write basic paragraphs including, but not limited to, process, description, cause and effect, and comparison and/or contrast. (SCC)

ENGL 189 — Writing for Vocational Students (1-3 cr)
Provides instruction in basic writing concepts, including sentence structure, paragraphs and longer papers. It also reviews fundamentals of grammar, punctuation and spelling. (SCC)

ENGL 195 — Special Topics in English for International Students (1-5 cr)
This advanced-level communications course is offered to students whose native languages are not English. The emphasis of each course is a particular communication topic: Writing, conversation and listening, pronunciation, study skills, and reading. Content and scope vary from quarter to quarter. The course may be repeated for credit with different topics. Prerequisite: International student program adviser or permission of instructor. (SFCC)

ENGL 208 — British Literature to 1800 (5 cr)
This survey covers British literature from Beowulf through the 18th century, emphasizing the major writers and their relationships to the significant literary traditions of their time. Prerequisite: SFCC only: Recommended minimum reading placement score: COMPASS 80, ASSET 40. (SCC, SFCC)

ENGL 209 — British Literature since 1800 (5 cr)
This survey focuses on the writing of Blake, Wordsworth, Coleridge, Keats, Byron, Shelley, Tennyson, Browning, Eliot, Yeats, Conrad, Lawrence, Joyce and selected contemporary writers. Instruction focuses on developing strategies for penetrating these writers by analyzing language, imagery, theme, plot, setting and character. Prerequisite: SFCC only: Recommended minimum reading placement score: COMPASS 80, ASSET 40. (SCC, SFCC)

ENGL& 220 — Intro to Shakespeare (5 cr)
Students read, analyze, interpret and evaluate Shakespeare's plays and sonnets. In addition, they learn about the historical, cultural and social milieu in which Shakespeare wrote his works. Students develop strategies for breaking Shakespeare's language barrier and learn to analyze plot, character, imagery and theme. Prerequisite: Minimum 2.0 in ENGL& 101. SFCC only: Recommended minimum reading placement score: COMPASS 80, ASSET 40. (SCC, SFCC)

ENGL& 235 — Technical Writing (5 cr)
Students learn to communicate information about a particular art, science, trade or profession. The course emphasizes such skills as clarity, objectivity, audience analysis and adherence to format. Students use subjects within their intended majors or career fields to write business correspondence, memoranda, resumes, mechanism descriptions, progress reports and analytical research reports. Prerequisite: Minimum 2.0 in ENGL& 101 or permission of instructor. (SCC, SFCC)

ENGL& 236 — Creative Writing I (5 cr)
This course teaches creative writing for beginners. It emphasizes writing as a craft; examines forms and techniques of professional writing through selective readings; offers students the opportunity to try their hand at a variety of styles, forms and techniques in both poetry and prose; as well as practice in writing, revision and editing skills. The format is an informal workshop that acquaints students with specialized skills such as preparing a manuscript for publication and working on a literary magazine in a variety of capacities. Prerequisite: ENGL& 101 or permission of instructor. (SCC, SFCC)

ENGL& 237 — Creative Writing II (5 cr)
This course teaches creative writing for intermediate writers. It is the logical continuation of ENGL& 236; however, it also is suited for students who, provided they have had prior writing experience, wish to pursue specific writing projects or are interested in both receiving and dispensing constructive peer critique in an informal workshop setting. Students have the opportunity to balance class activities with individual writing interests. The emphasis is on writing as a serious craft, and the course focuses primarily on poetry and prose though other forms of writing also may be included. Prerequisite: ENGL& 236 or permission of instructor. (SCC, SFCC)

ENGL 238 — Advanced Expository Writing (5 cr)
This class is a logical extension of ENGL& 101 and ENGL& 102, going beyond rhetorical modes and research skills to explore and practice the longer essay. Prerequisite: ENGL& 101, ENGL& 102. (SCC, SFCC)

ENGL 241 — The Bible as Literature (5 cr)
Students experience a literary study of history's most influential book. Readings from the Bible illustrate its major themes and genres. An exploration of the Bible's historical and cultural contexts provides background for these readings. Students gain a foundation for appreciating the Bible's massive impact on subsequent literature. (SCC)

ENGL 247 — American Multicultural Literature (5 cr)
This course surveys contemporary African American, Asian American, Latino American, and Native American literature from 1950s to the present and may include other diverse literatures, such as Jewish, Gay/Lesbian, or Indian, etc. (SCC, SFCC)

ENGL 248 — American Literature to 1865 (5 cr)
This survey course examines major writers of the period including Taylor, Edwards, Franklin, Irving, Cooper, Poe, Emerson, Thoreau, Hawthorne, Melville, Whitman, and Dickinson. Prerequisite: SFCC only: Recommended minimum reading placement score: COMPASS 80, ASSET 40. (SCC, SFCC)

ENGL 249 — American Literature since 1865 (5 cr)
This survey course focuses on selected works of representative American writers from the Civil War to the present. Writers such as Twain, Chopin, Hemingway, Hughes, Ginsberg Plath, and Morrison among others are analyzed, paying particular attention to the cultural and historical contexts from which these diverse writers emerge and to which they speak. Prerequisite: SFCC only: Recommended minimum reading placement score: COMPASS 80, ASSET 40. (SCC, SFCC)

ENGL 251 — Introduction to Language (5 cr)
This course includes contemporary English language study introducing morphology, phonology, syntax and semantics. Language acquisition, animal communication, language communications and dialects are explored. (SCC)

ENGL 254 — Literary Magazine Production (2-5 cr)
A production course for Legend's, SCC's literary magazine. Discussion and criticism of writing, theory and practice; layout and design; process of publication, theory and practice. (SCC)

ENGL 255 — Advanced Literary Magazine Production (2-5 cr)
A continuation of the concepts introduced in ENGL 254 with emphasis on advanced concepts and production work involved in the creation of Legend's, SCC's literary magazine. Discussion and criticism of writing, theory and practice; layout and design; process of publication, theory and practice. Prerequisite: ENGL 254. (SCC)

ENGL 259 — African American Literature (5 cr)
This course examines the African American literary tradition through the works of key authors, from pre-Civil War writings to the present, locating these works in cultural and historical contexts. (SCC, SFCC)

ENGL 261 — Twentieth Century Novel (5 cr)
Students read, discuss and write about novels, leading them to a deeper appreciation and understanding of the genre and its practitioners. Novels vary from quarter to quarter. Prerequisite: SFCC only: Recommended minimum reading placement score: COMPASS 80, ASSET 40. (SCC, SFCC)

ENGL 266 — Cooperative Education Seminar (1-2 cr)
For course description, see Cooperative Education. (SCC)

ENGL 267 — Cooperative Education Work Experience (1-18 cr)
For course description, see Cooperative Education. (SCC)

ENGL 271 — World Literature to 1650 (5 cr)
This course explores foundational works of Middle Eastern, Mediterranean, and European civilizations from the dawn of literacy to the Renaissance. Representative works may include but are not limited to Gilgamesh, the Bible, The Odyssey Lysistrata, the Qu'ran, the Inferno and Othello. Prerequisite: Sophomore standing or ENGL& 101. SFCC only: Recommended minimum reading placement score: COMPASS 80, ASSET 40. (SCC, SFCC)

ENGL 272 — World Literature since 1650 (5 cr)
Students read and trace the emergence of a global literature from the period of European colonialism to the contemporary multicultural world. Representative authors may include Moliere, Voltaire, Goethe, Tolstoy, Kafka, Pirandello, Narayan, Garcia Maquez and Achebe. Prerequisite: Sophomore standing and/or ENGL& 101. SFCC only: Recommended placement score: COMPASS 80, ASSET 40. (SCC, SFCC)

ENGL 278 — Women Writers (5 cr)
Students analyze, discuss and write about literature written by women in order to gain a greater understanding of and appreciation for the contributions of women to the field of literature. Emphasis is placed on the identification of themes, conventions and techniques of women writers across class and cultural boundaries. Prerequisite: SFCC only: Recommended minimum reading placement score: COMPASS 80, ASSET 40. (SCC, SFCC)

ENGL 295 — Special Studies in Literature (2-5 cr)
Students analyze, discuss and write about the literature of a particular genre, author or period. The course content varies and may include the following: Classical mythology, contemporary novels, mystery or crime fiction, historical novels, Western fiction, women writers, and Black and Chicano literature. The emphasis of each course is understanding the themes, conventions and techniques of the writers within the genre. The aim is to assist students in recognizing the ways in which literature reflects and challenges the values of its audience. Course may be repeated for credit with different topics. Prerequisite: ENGL& 101, grade of 2.0 or above; or permission of instructor. SFCC only: Recommended minimum reading placement score: COMPASS 80, ASSET 40. (SCC, SFCC)

ENVIRONMENTAL SCIENCES

ENVS& 101 — Intro to Env Science (5 cr)
A study of the basic concepts of ecology, including ecosystems structure and function, energy flow, biochemical cycles, limiting factors, population dynamics and community interactions. Emphasis is placed on the use of the scientific method to investigate man's current environmental problems and to propose possible solutions. Meets A.A. degree lab science requirement. (SCC, SFCC)

ENVS 104 — Environmental Conservation (5 cr)
This course introduces basic principles of conservation with emphasis on renewable natural resources, soils, water, forest, range, wildlife and recreation. (SCC)

ENVS 110 — Plant Biology (5 cr)
This course introduces biological principles and the relationship between plants and man. Students learn how the plant-dependent world ecosystem supports human existence. (SCC)

ENVS 207 — Wildlife Biology (5 cr)
This course provides students with the basic principles of wildlife ecology, habitat, population dynamics, behavior and management practices. (SCC)

ENVS 208 — Outdoor Recreation and Interpretation (3 cr)
Students learn about a variety of regional outdoor recreation activities, their management, with an emphasis on safety and environmental ethics. (SCC)

ENVS 210 — Environmental Soil Science (5 cr)
This course introduces the properties, characteristics and functions of forest soils found in natural conditions. The relationships between native vegetation and noncultivated soils are emphasized. (SCC)

ENVS 211 — Weather and Climate (5 cr)
This course introduces the descriptive treatment of meteorological and climatological phenomena including winds, weather fronts, air masses, clouds, temperature and precipitation. Basic computations, weather map analysis, forecasting and instrumentation techniques are emphasized. (SCC)

ENVS 217 — Field Sampling Techniques (4 cr)
This course builds on basic ecology skills and focuses on applied sampling theory, field approaches, and practical applications relative to fish and wildlife habitat and population sampling methods. Prerequisite: NATRS 120, 122, ENVS 207 or permission of instructor. (SCC)

ENVS 218 — Environmental Science Conservation Planning (2 cr)
This course provides students with training in environmental conservation planning for working with private landowners and governmental agencies. Procedures and guidelines outlined in the National Planning Procedures handbook (NPPH) and current conservation planning policies are emphasized. Multidisciplinary in nature, this course prepares students to assess needs and impacts on and off-site. Writing conservation plans for private landowners and governmental agencies also is covered. (SCC)

ENVS 227 — Advanced Wildlife Biology (4 cr)
This course builds on the basic ecology skills and sampling skills developed in ENVS 217 and focuses on the integration and practical application of fish and wildlife ecological theory, applied sampling theory, and field skills in completing realistic projects and scenarios. Prerequisite: ENVS 217. (SCC)

ENVS 237 — Bird Identification (3 cr)
This course develops bird identification skills necessary to compete for jobs conducting landbird monitoring within this region. (SCC)

FASHION MERCHANDISING

FMDSE 111 — Fashion Merchandising Seminar (1-2 cr)
Gives the student an opportunity to pursue topics of interest related to real job situations, and serves as the vehicle for determining and granting work experience and cooperative education work experience. Must be taken concurrently by students who wish to receive work experience and cooperative education work experience. Prerequisite: Concurrent enrollment in fashion merchandising or retail management program. (SFCC)

FMDSE 113 — Fashion Merchandising Seminar (1-2 cr)
Gives the student an opportunity to pursue topics of interest related to real job situations, and serves as the vehicle for determining and granting work experience and cooperative education work experience. Must be taken concurrently by students who wish to receive work experience and cooperative education work experience. Prerequisite: Concurrent enrollment in fashion merchandising or retail management program. (SFCC)

FMDSE 150 — Principles of Retail Merchandising (5 cr)
Careers and opportunities in the retail field; an overview of store location, retail organization and merchandise management including promotion, pricing, salesmanship and inventory control methods. (SFCC)

FMDSE 152 — Professional Development in Business (2 cr)
Analysis and planning for career building, job seeking, job holding and progression in employment. Emphasizes personal adjustment in developing attitudes, personality, appearance and effective communication necessary for successful retail management. (SFCC)

FMDSE 155 — Fashion Trends (3 cr)
Fashion terminology and fashion institutions are analyzed. The role of fashion in apparel and nonapparel goods along with the recurrence of styles are traced through history. A study of the fashion concept, major designers, and fashion fads and cycles is presented. (SFCC)

FMDSE 180 — Retail Sales Techniques (3 cr)
Effective retail sales techniques are discussed and practiced in a seminar atmosphere. Understanding of professional skills and attitudes necessary to become an effective retail sales professional is emphasized. Student develops practical application of retail sales principles through role playing, sales demonstrations and personalized learning projects. (SFCC)

FMDSE 201 — Fashion Fabrics (3 cr)
The origin and construction of current natural and synthetic fibers are studied together with their uses, characteristics and sources of supply. The textile laws and regulations concerning the labeling of textiles also are analyzed. (SFCC)

FMDSE 210 — Merchandising Management (5 cr)
Deals with percentages, trade discounts, markup, markdown and related calculations. The concepts of open-to-buy price lines, budgeting, inventory control systems and assortment planning are analyzed. Prerequisite: BUS 103 and FMDSE 150 or permission of instructor. (SFCC)

FMDSE 224 — Principles of Retail Promotion (5 cr)
This course is designed to increase the student's understanding of advertising and sales promotion related to retailing. This objective is accomplished in two ways: 1) through the use of the text which outlines the concepts and problems of retail advertising and sales promotion, and gives examples of methods and techniques used in the field; and 2) through lectures, class discussions, field trips, guest speakers and audiovisual aids. (SFCC)

FMDSE 267 — Cooperative Education Work Experience (1-18 cr)
For course description, see Cooperative Education. (SFCC)

FIRE OFFICER

FOD 101 — Fire Officer IA (3 cr)
This course introduces students to a fire officer's duties. Content includes the required mindset, report writing, diversity, workplace safety, decision making, quality assurance, supervisory practices and pre-incident planning. Prerequisite: Fire department affiliation. (SCC)

FOD 102 — Fire Officer IA Work Based Learning (3 cr)
Students learn to manage task assignments, citizens' complaints, accident investigations, member assistant programs, and to apply human resource management policies and safety regulations. Prerequisite: FOD 101 and worksite authorization agreement. (SCC)

FOD 103 — Fire Officer IB (3 cr)
This course gives students a profound understanding of a fire officer's duties. Determining fire cause, emergency operations, compliance issues, scene safety, Incident Management System (IMS), strategy/tactics, assessment and action planning, and the public information officer (PIO) functions are emphasized. Prerequisite: FOD 102 and fire department affiliation. (SCC)

FOD 104 — Fire Officer IB Work Based Learning (3 cr)
This course includes directing training evolutions, managing public inquiries, determining preliminary fire cause, pre-incident planning, incident action planning and emergency operations. Prerequisite: FOD 103 and work site authorization agreement. (SCC)

FOD 110 — Fire Service Leadership (3 cr)
This course emphasizes the effectiveness of a fire officer. Content includes role conflict, creativity, personal power, ethics, problem solving, decision making, situational leadership, delegating, coaching and discipline. Prerequisite: FOD 103 and fire department affiliation. (SCC)

FOD 131 — Fire Service Instructor I (3 cr)
This course introduces students to the skills necessary for fire service instructors. Content includes instructor challenges, presentation skills, legal considerations, student learning, delivery methods, instructional media and evaluating performance. (SCC)

FOD 132 — Fire Service Instructor II Work Based Learning (3 cr)
Students develop skills in the four-step lesson plan. Students design curriculum and present lessons based on their awareness in the fire service utilizing the skills learned from instructor courses. Prerequisite: Fire department affiliation. (SCC)

FOD 133 — Fire Service Instructor II (3 cr)
Students learn to advance as a fire service instructor in this course. Content includes planning models, needs and task analysis, lesson plan development, performance testing, supervisor training programs and critiques. Prerequisite: FOD 132 and fire department affiliation. (SCC)

FOD 140 — Fire Service Incident Safety Officer (2 cr)
This course is designed to help students identify the role of the safety officer on specific types of incidents. Students learn to develop and apply safety plans for various incidents. Prerequisite: Fire department affiliation. (SCC)

FOD 201 — Fire Officer IIA (3 cr)
Further understanding of a fire officer's duties is emphasized in this course. Content includes interaction with government agencies, report writing, managing human resources, RMS, budgets, performance appraisals, exposure reports and public education. Prerequisite: FOD 104 and fire department affiliation. (SCC)

FOD 202 — Fire Officer IIA Work Based Learning (3 cr)
This course emphasizes maximizing member and unit performance, delivering public education, changing policies, budget preparation, report writing and analyzing accident/injury reports. Prerequisite: FOD 201 and work site authorization agreement. (SCC)

FOD 203 — Fire Officer IIB (3 cr)
Further understanding of a fire officer's duties is emphasized in this course. Content includes interaction with government agencies, report writing, managing human resources, RMS, budgets, performance appraisals, exposure reports and public education. Prerequisite: FOD 202 and fire department affiliation. (SCC)

FOD 204 — Fire Officer IIB Work Based Learning (3 cr)
This course emphasizes maximizing member and unit performance, preparing news releases, conducting fire inspections, determining a fire's point of origin and producing incident operational plans. Prerequisite: FOD 203 and work site authorization agreement. (SCC)

FOD 205 — Fire Investigation (3 cr)
Students learn methods of determining the area of fire origin, fire causes, fire spread and other aspects of fire behavior; recognition of accidental and incendiary fires; securing and preserving evidence of a suspected arson; witness interrogation methods; arson laws and court procedures; court case preparation and testimony; coordination with other investigative agencies; compilation of reports and records; and review of case histories. Prerequisite: Volunteer or career firefighter or permission of program coordinator. (SCC)

FOD 206 — Fire Inspection and Codes (4 cr)
Students study the fire code as it applies to fire prevention inspections at the fire company level. The fire code's relationship to the building Code and other recognized standards are presented. General provisions of the fire code maintenance of exit way, fire protection, flammable and combustible liquids, liquified petroleum gases, places of assembly, and general precautions against fire are emphasized. Discussions of public relations and alternate methods and materials give the course a realistic approach to field operations. Prerequisite: Volunteer or career firefighter or permission of program coordinator. (SCC)

FOD 210 — Incident Management-Multi-Company Operations (3 cr)
This course emphasizes the management of multi-alarm incidents. Content includes expanding incident management systems (IMS), scene safety, managing resources, pre-incident planning, decision making, communications, post-incident analysis and multiple scenarios. Prerequisite: Fire department affiliation. (SCC)

FIRE SCIENCE TECHNOLOGY

FS 100 — Orientation to Fire Science (2 cr)
An introductory class designed to provide students with the history and philosophy of fire science. Content areas to be covered in this course also include career orientation, employment requirements and fire personnel responsibilities. (SCC)

FS 105 — Principles of Hydraulics (4 cr)
Students are introduced to the fundamentals of fluids in motion and at rest and their applications to the fire service industry. (SCC)

FS 152 — Building Construction (3 cr)
This course covers the classifications of buildings and what constitutes a rated building. Fire and life safety devices required by the U.B.C. are emphasized. The installation of fire assemblies and appliances are introduced. (SCC)

FS 160 — Fire Tactics (3 cr)
This course introduces students to the basic principles of fire tactics and strategies, and provides students with the skills needed to safely and effectively supervise company-level fire ground operations. Principles of size-up and fire spread, hazard identification, fire attack methodology based on the principles of RECEO-VS, supervision and coordination of assigned resources, and fire ground safety are emphasized. (SCC)

FS 170 — Hazardous Materials I (3 cr)
Students study hazardous materials regulations; terminology; identification systems, shipping and storage containers; incident command systems and basic analysis; information resources; chemical protective clothing, and decontamination. (SCC)

FS 177 — Wildland Fire Operations (3 cr)
This course is designed to prepare the student to fight wildland fires. It includes information on safety practices and initial control strategies, and meets the NWCG requirements for S-130/S-190 and L-130. Prerequisite: Volunteer or career firefighter or acceptance by special permission. (SCC)

FS 200 — Orientation to Fire Science (3 cr)
This course meets the requirements and guidelines for employees working with and handling hazardous waste regulated by the Occupational Safety and Health Administration (OSHA). (SCC)

FS 211 — Introduction to Fire Science (4 cr)
This course introduces students to the basics of firefighting. Topics include safety, fire behavior, personal protective equipment, portable extinguishers, search and rescue, ropes and knots, hoses, ladders, and emergency vehicle accident prevention. Prerequisite: Successful completion of first year general education requirements and concurrent enrollment in FS 212. (SCC)

FS 212 — Fire Science Applications I (6 cr)
Practical applications using firefighting equipment including personal protective equipment, hoses, ladders and extinguishers are emphasized. Emergency vehicle accident prevention methods also are included. (SCC)

FS 220 — Fire Protection Systems (2 cr)
This course introduces water type fire extinguishing sprinkler systems, protections systems for special hazards, and fire alarm protection systems. Students visit local facilities that have fire protection equipment and systems and learn to make critical appraisals. (SCC)

FS 221 — Intermediate Fire Science (4 cr)
This course provides a continuation of the concepts introduced in FS 211 with emphasis on the incident command system, forcible entry, ventilation, salvage, overhaul, fire cause determination, communications and water supply. Prerequisite: Successful completion of FS 211, 212 and concurrent enrollment in FS 222. (SCC)

FS 222 — Fire Science Applications II (6 cr)
Practical applications using the incident command system are emphasized in this course. Practical skills include forcible entry, ventilation, salvage, overhaul, fire cause determination, communications and water supply. Prerequisite: Successful completion of FS 211, 212 and concurrent enrollment in FS 221. (SCC)

FS 231 — Advanced Fire Science (4 cr)
This course provides a continuation of the concepts introduced in FS 211 and 221 with emphasis on fire streams, fire suppression, heavy-duty rescue, vehicle fires, wildland fires and fire prevention. Prerequisite: Successful completion of FS 221, 222 and concurrent enrollment in FS 232. (SCC)

FS 232 — Fire Science Applications III (6 cr)
Practical lab applications utilizing skills from FS 212 and 222 are emphasized. Fire streams, fire suppression techniques, heavy-duty rescue, vehicle fires, wildland fires and fire prevention also are emphasized. Prerequisite: Successful completion of FS 221, 222 and concurrent enrollment in FS 231. (SCC)

FS 233 — Professional Development (2 cr)
This course explores a variety of self-development activities that assist students in gaining employment after graduation. These activities include practice civil service examinations, both written and oral, in addition to exercises in professional demeanor as appropriate to fire fighters. This course is required in one of the student's last two quarters prior to graduation. (SCC)

FS 241 — Recruit Fire Fighter Academy (5 cr)
This course provides the students with the basic skills and knowledge needed to perform fire-fighting tasks under direct supervision. Objectives are based on NFPA 1001, Fire Fighter 1, and Fire Fighter Professional Standards. Prerequisite: Active member in a fire department. (SCC)

FS 248 — Rescue System I (3 cr)
This course provides the students with the ability to apply basic search and rescue skills, approach rescue situations safely and understand the organizational concerns at a structural collapse incident. Prerequisite: Firefighter I or equivalent. (SCC)

FS 250 — Fire Science Recruit Academy Theory (21 cr)
A comprehensive study of fire science theory, equipment, and methods used to fight fires, and the health and safety factors that may affect the firefighter. Prerequisite: Open only to students accepted into the Recruit Academy. (SCC)

FS 251 — Fire Science Recruit Academy Lab (16 cr)
Practical applications and fire drills utilizing a variety of fire-fighting tactics and equipment. Related physical and manipulative skills also are practiced. Prerequisite: Open only to students accepted into the Recruit Academy. (SCC)

FS 266 — Cooperative Education Seminar (1-2 cr)
For course description, see Cooperative Education. (SCC)

FS 267 — Cooperative Education Work Experience (1-18 cr)
For course description, see Cooperative Education. (SCC)

FS 288 — Cooperative Education Work Experience (No Seminar) (1-18 cr)
For course description, see Cooperative Education. (SCC)

FRENCH

FRCH& 121 — French I (5 cr)
FRCH& 121, 122 and 123 are parts of a beginning series designed to develop skills in reading, writing, speaking and listening to a basic level of proficiency. It enables the student to communicate basic ideas in French and understand the cultural context of the language through the study of the French-speaking regions around the world. FRCH& 121 is taught through an experiential methodology that entails the exclusive use of French in the classroom, emphasis on oral and written communicative skills, interpersonal exchange of ideas, interactive presentation of grammar, a multimedia approach and daily practice outside of class. Language laboratory work is an integral part of this language series. (SCC, SFCC)

FRCH& 122 — French II (5 cr)
FRCH& 121, 122 and 123 are parts of a beginning series designed to develop skills in reading, writing, speaking and listening to a basic level of proficiency. It enables the student to communicate basic ideas in French and understand the cultural context of the language through the study of the French-speaking regions around the world. FRCH& 121 is taught through an experiential methodology that entails the exclusive use of French in the classroom, emphasis on oral and written communicative skills, interpersonal exchange of ideas, interactive presentation of grammar, a multimedia approach and daily practice outside of class. Language laboratory work is an integral part of this language series. Prerequisite: FRCH& 121 or one year of high school French or permission of instructor. (SCC, SFCC)

FRCH& 123 — French III (5 cr)
FRCH& 121, 122 and 123 are parts of a beginning series designed to develop skills in reading, writing, speaking and listening to a basic level of proficiency. It enables the student to communicate basic ideas in French and understand the cultural context of the language through the study of the French-speaking regions around the world. FRCH& 121 is taught through an experiential methodology that entails the exclusive use of French in the classroom, emphasis on oral and written communicative skills, interpersonal exchange of ideas, interactive presentation of grammar, a multimedia approach and daily practice outside of class. Language laboratory work is an integral part of this language series. Prerequisite: FRCH& 122 or one and one-half years of high school French or permission of instructor. (SCC, SFCC)

FRCH& 221 — French IV (5 cr)
FRCH& 221, 222 and 223 are parts of an intensive intermediate-level language series designed to answer the needs of students coming from varying backgrounds. These students are studying French for a multitude of reasons and hope to review the grammar taught in our 100-level classes. FRCH& 221, 222 and 223 aim at the further development of the students' four skills (reading, writing, listening and speaking) up to an intermediate level of proficiency. Emphasis is on reviewing grammar in order to express oneself in writing or in conversations, and experiencing the language in its cultural contexts through the study of the French-speaking regions around the world. FRCH& 221, 222 and 223 are taught through an experiential methodology, which entails exclusive use of French in the classroom, emphasis on communicative skills, interactive and contextualized use of grammar through textbook materials, on-line exercises, audio-tapes, magazines and various other media, and daily practice outside of class. Prerequisite: FRCH& 123 or permission of instructor. (SCC, SFCC)

FRCH& 222 — French V (5 cr)
FRCH& 221, 222 and 223 are parts of an intensive intermediate-level language series designed to answer the needs of students coming from varying backgrounds. These students are studying French for a multitude of reasons and hope to review the grammar taught in our 100-level classes. FRCH& 221, 222 and 223 aim at the further development of the students' four skills (reading, writing, listening and speaking) up to an intermediate level of proficiency. Emphasis is on reviewing grammar in order to express oneself in writing or in conversations, and experiencing the language in its cultural contexts through the study of the French-speaking regions around the world. FRCH& 221, 222 and 223 are taught through an experiential methodology, which entails exclusive use of French in the classroom, emphasis on communicative skills, interactive and contextualized use of grammar through textbook materials, on-line exercises, audio-tapes, magazines and various other media, and daily practice outside of class. Prerequisite: FRCH& 221 or permission of instructor. (SCC, SFCC)

FRCH& 223 — French VI (5 cr)
FRCH& 221, 222 and 223 are parts of an intensive intermediate-level language series designed to answer the needs of students coming from varying backgrounds. These students are studying French for a multitude of reasons and hope to review the grammar taught in our 100-level classes. FRCH& 221, 222 and 223 aim at the further development of the students' four skills (reading, writing, listening and speaking) up to an intermediate level of proficiency. Emphasis is on reviewing grammar in order to express oneself in writing or in conversations, and experiencing the language in its cultural contexts through the study of the French-speaking regions around the world. FRCH& 221, 222 and 223 are taught through an experiential methodology, which entails exclusive use of French in the classroom, emphasis on communicative skills, interactive and contextualized use of grammar through textbook materials, on-line exercises, audio-tapes, magazines and various other media, and daily practice outside of class. Prerequisite: FRCH& 222 or permission of instructor. (SCC, SFCC)

FRCH 241 — Conversation and Culture (2 cr)
FRCH 241 is designed for students who wish to develop their French conversational skills up to an intermediate level, through class discussions and short oral presentations. At the first meeting, student participants will have the opportunity to design the course topic discussions based on, but not limited to, the following topics: Diversity of France, politics, economics, European Union, currency, family values, stereotypes, history, geography, media, French cultural and literary traditions, and current events. Use of the ILC is recommended. Prerequisite: FRCH& 123 or permission of instructor. (SCC, SFCC)

FRCH 266 — Cooperative Education Seminar (1-2 cr)
For course description, see Cooperative Education. (SCC)

FRCH 267 — Cooperative Education Work Experience (1-18 cr)
For course description, see Cooperative Education. (SCC)

FUNDAMENTALS OF SCIENCE

FSCI 098 — Fundamentals of Science (5 cr)
An introduction to the basic ideas of the scientific method and the tools and concepts needed to succeed in an introductory collegiate science course. (SCC)

FSCI 101 — Interdisciplinary Science (5 cr)
This is the first of a three-quarter sequence of classes. An integrated science course that involves physics, astronomy, and geology. Climate and global change will be used as a theme to develop basic concepts in science, such as measurement, analysis of data, hypothesis generation, and testing. Students will actively be involved in class as they collect and analyze data, and state relevant facts pertaining to a selection of topics involving concepts in physics, astronomy, and geology. Students will maintain a laboratory notebook and formally present data to peers throughout the course. Prerequisite: 2.0 or better in MATH 099. (SCC, SFCC)

GENERAL STUDIES

GENST 090 — Pretechnical Basic Skills (10-18 cr)
Designed to familiarize the student with the requirements to succeed in the engineering-related field. Additionally, fundamental skill enhancement is provided in reading, mathematics, and written and verbal communication; and study techniques such as test taking, lecture notes and using textbooks. This course feeds into fluid power, electronics, civil engineering technology, mechanical engineering technology, architectural technology, industrial electricity and robotics as a pre-engineering course. (SCC)

GENST 100 — Library Research Skills (2 cr)
This is a course designed for students from all programs. Students discover and explore information resources and learn successful library research techniques. Emphasis is placed on skills that are useful throughout college, as well as for lifelong learning. (SCC)

GENST 104 — The Internet and the Art of Research (1-3 cr)
An introduction to the Internet and its research potential is demonstrated. Students use Internet-based resources to locate books, periodicals and other information. Efficient searching techniques and strategies to evaluate information are stressed. (SFCC)

GENST 105 — Portfolio Development (3 cr)
A lecture/discussion course designed to instruct students in methods utilized to summarize and document prior learning experiences. Students describe skills, competencies and areas of knowledge that may have been attained outside of a traditional classroom environment. Prerequisite: Minimum ASSET score of 40 - reading and writing. (SCC)

GENST 106 — College Success (2-3 cr)
This course provides an opportunity for students to learn about services and strategies to help them become successful college students. The overall goal is to increase the likelihood that the students' year(s) at SFCC/SCC is successful, both academically and socially. It is designed for entering students and other students interested in becoming more effective college students. (SCC, SFCC)

GENST 107 — First Year Introduction (1 cr)
This course provides new SFCC students with a comprehensive introduction to college. Through seminars, learning modules and sample classes, students are expected to develop the fundamental skills and attitudes necessary for success in college. FYI helps students connect with other students, faculty and staff. Students learn about campus resources and develop an educational plan. (SFCC)

GENST 108 — Learning for the 21st Century (5 cr)
Emphasis is on building the skills and techniques for successful life-long learning and identifying personal learning styles and strengths that facilitate learning in an on-line environment. Through a quarter-long research project on a global issue, participants examine various strategies for locating, evaluating and applying information resources in the research process with attention to information policy issues like censorship and freedom of information. (SCC, SFCC)

GENST 109 — Applied Critical Thinking (3 cr)
In this course, learners gain mastery of the following fundamental thinking skills competencies: Assumption, inferences, implications, conclusions, questions at issue, points of view, concepts and purpose of thinking consequences. Learners master the ability to assess their thinking by using the following intellectual standards: Clarity, specificity, relevance, logic, significance, accuracy, preciseness, consistency, completeness, depth and broadness. Learners practice reasoning abilities and begin developing intellectual traits. (SCC, SFCC)

GENST 114 — Thriving In College (2 cr)
Learn about college life! This course for new college students teaches success strategies by helping students to become familiar with the campus, to discover resources available to assist them in their collegiate journey, and to connect them with their peers. Students will learn how to interact effectively with instructors and will gain a solid foundation in study skills that are crucial for academic achievement. The class is intended to be taken concurrently with a 5-credit content area course. (SFCC)

GENST 115 — Internet Issues (2 cr)
Using effective web searching techniques, students in this course explore controversial topics that relate to the Internet, while discovering the richness of net resources. Issues such as privacy, encryption, censorship, freedom of information and other prominent topics on the Internet will be explored while students learn to be effective searchers. Information is analyzed, compared and evaluated, as are the search engines and indexes used to retrieve it. (SFCC)

GENST 140 — Adventures in Attitude (3 cr)
Students learn to recognize personal attitudes and choose positive attitudes which result in positive successful living. Content includes human relations, attitude awareness, planning and self-management, personality development, group dynamics, communication and problem solving. (SCC)

GENST 150 — General Studies Seminar (1-5 cr)
A seminar course to support various learning activities that assist students in the development of personal, professional and educational goals. Instructors may choose from a menu of topics to be presented. Areas of instruction may include human relations, interpersonal skills, written communications, decision-making/problem-solving techniques and/or workplace requirements. Course content varies depending on the number of credits and instructional areas chosen. (SCC)

GENST 151 — General Studies Seminar (1-5 cr)
A seminar course to support various learning activities that assist students in the development of personal, professional and educational goals. Instructors may choose from a menu of topics to be presented. Areas of instruction may include human relations, interpersonal skills, written communications, decision-making/problem-solving techniques and/or workplace requirements. Course content varies depending on the number of credits and instructional areas chosen. (SCC)

GENST 152 — General Studies Seminar (1-5 cr)
A seminar course to support various learning activities that assist students in the development of personal, professional and educational goals. Instructors may choose from a menu of topics to be presented. Areas of instruction may include human relations, interpersonal skills, written communications, decision-making/problem-solving techniques and/or workplace requirements. Course content varies depending on the number of credits and instructional areas chosen. (SCC)

GENST 154 — Introduction to Service Learning (2-5 cr)
This class combines an academic study of the foundations of the contemporary movement toward service learning with direct experience of community outreach. By building on learning through service to an area of local community need, students explore their own assumptions, values, questions, and beliefs regarding some of the key issues in social philosophy and ethics and democratic citizenship. Through students' community service experience, lecture, reading and research, students become familiar with individual and group aspects of human behavior. (SFCC)

GENST 155 — Service Learning Project (1 cr)
This course combines the academic study of service learning with practical experiences by student participation in the community. The course is directly linked to the academic or professional/technical area of study in which the student is engaged. Prerequisite: Permission of instructor. (SCC)

GENST 202 — Assertive Training for Women (2 cr)
Individuals develop skills for expressing feelings and exercising rights without impinging on others, increase self-awareness and develop techniques of effective problem solving. (SCC)

GENST 203 — Prior Learning Assessment Portfolio Development (1 cr)
This class explores the use of a portfolio to document learning experiences. Students develop a personal and/or professional portfolio resource notebook by using their choice of media. Prerequisite: ENGL& 101 or above or 80 percent pass of COMPASS testing. (SFCC)

GENST 266 — Cooperative Education Seminar (1-2 cr)
For course description, see Cooperative Education. (SCC, SFCC)

GENST 267 — Cooperative Education Work Experience (1-18 cr)
For course description, see Cooperative Education. (SCC, SFCC)

GENST 280 — Honors Seminar I (1 cr)
SFCC Honors Seminars offer a rigorous course of study for academically talented students. Exceptional students have the opportunity to explore topics that highlight each Instructor's training and expertise. Enrollment in these seminars is by invitation only. Topic(s) for each term will be posted in the invitation. Students may take other Honors Seminar courses for a maximum of 5 credits. Prerequisite: Permission of honors coordinator with 3.5 GPA or above usually required. (SFCC)

GENST 281 — Honors Seminar II (1 cr)
SFCC Honors Seminars offer a rigorous course of study for academically talented students. Exceptional students have the opportunity to explore topics that highlight each Instructor's training and expertise. Enrollment in these seminars is by invitation only. Topic(s) for each term will be posted in the invitation. Students may take other Honors Seminar courses for a maximum of 5 credits. Prerequisite: Permission of honors coordinator with 3.5 GPA or above. (SFCC)

GENST 282 — Honors Seminar III (1 cr)
SFCC Honors Seminars offer a rigorous course of study for academically talented students. Exceptional students have the opportunity to explore topics that highlight each Instructor's training and expertise. Enrollment in these seminars is by invitation only. Topic(s) for each term will be posted in the invitation. Students may take other Honors Seminar courses for a maximum of 5 credits. Prerequisite: Permission of honors coordinator with 3.5 GPA or above usually required. (SFCC)

GENST 283 — Honors Seminar IV (1 cr)
SFCC Honors Seminars offer a rigorous course of study for academically talented students. Exceptional students have the opportunity to explore topics that highlight each Instructor's training and expertise. Enrollment in these seminars is by invitation only. Topic(s) for each term will be posted in the invitation. Students may take other Honors Seminar courses for a maximum of 5 credits. Prerequisite: Permission of honors coordinator with 3.5 GPA or above usually required. (SFCC)

GENST 284 — Honors Seminar V (1 cr)
SFCC Honors Seminars offer a rigorous course of study for academically talented students. Exceptional students have the opportunity to explore topics that highlight each Instructor's training and expertise. Enrollment in these seminars is by invitation only. Topic(s) for each term will be posted in the invitation. Students may take other Honors Seminar courses for a maximum of 5 credits. Prerequisite: Permission of honors coordinator with 3.5 GPA or above usually required. (SFCC)

GENST 291 — Educational Tour (1-5 cr)
An educational tour sponsored by one or more departments offering students an opportunity to explore a particular subject off campus. The purpose of the trip is to broaden a student's understanding of material covered in the classroom or to expose the student to cultural experiences not available on campus. The tours may be to either domestic or foreign locations. (SCC, SFCC)

GENST 292 — Educational Tour (1-5 cr)
An educational tour sponsored by one or more departments offering students an opportunity to explore a particular subject off campus. The purpose of the trip is to broaden a student's understanding of material covered in the classroom or to expose the student to cultural experiences not available on campus. The tours may be to either domestic or foreign locations. (SCC, SFCC)

GENST 293 — Educational Tour (1-5 cr)
An educational tour sponsored by one or more departments offering students an opportunity to explore a particular subject off campus. The purpose of the trip is to broaden a student's understanding of material covered in the classroom or to expose the student to cultural experiences not available on campus. The tours may be to either domestic or foreign locations. (SCC, SFCC)

GEOGRAPHY

GEOG 101 — Introduction to Geography (5 cr)
An introduction to human and physical geography including mankind's reciprocal relationship with environmental concerns, world place geography, geomorphology and economic geography. Optional field trips included to assist students in better understanding course content. Prerequisite: SFCC recommended minimum reading placement score: COMPASS 80, ASSET 40. (SCC, SFCC)

GEOG 230 — World Regional Geography (5 cr)
A survey of world geographical relationships. Includes an examination of the distribution of selected physical and human phenomenon and the processes responsible for the distributions and varying interrelationships from place to place between humans and their environment. Prerequisite: SFCC recommended minimum reading placement score: COMPASS 80, ASSET 40. (SCC, SFCC)

GEOG 260 — The Violent Earth (5 cr)
Students are offered a descriptive and interpretive examination of the influence and relationship of man with the natural hazards of the earth, including identification, analysis, distribution and geographic patterning of the following: Hurricanes, water spouts, disease, tornadoes, wind shear, tsunamis, tides, river tides, volcanoes, glaciers, earthquakes, quick clay (spontaneous liquification), landslides, floods, droughts and lightning. Prerequisite: SFCC recommended minimum reading placement score: COMPASS 80, ASSET 40. (SCC, SFCC)

GEOLOGY

GEOL& 100 — Survey of Earth Science (5 cr)
This course, offered as a television class, is a survey of physical geology including palenontology, mapping and earth history. While some laboratory work and field trips are elements of this course, it does not qualify as a laboratory science. Credit will not be granted for both GEOL& 101 and GEOL& 100. This is a physical science course. (SCC, SFCC)

GEOL& 101 — Intro Physical Geology (5 cr)
An introductory course in geology designed to acquaint beginning geology students with the importance of geology and minerals in their everyday lives through the study of the general concepts of geology, plate tectonics, earthquakes, mountain building, formation of continents, materials on earth, erosional processes and patterns, underground water, glaciation, and shoreline formations. laboratory covers mineral and rock identification and map interpretation. Credit will not be granted for both GEOL& 101 and GEOL& 100. (SCC, SFCC)

GEOL 114 — Earth Systems Science--Online (5 cr)
This course introduces students to the physical evidence, scientific principles and methods of analysis necessary to understand how Earth systems interact to generate and sustain the physical environment in which we live. It is taught online via the Internet. This course does not qualify as a laboratory science. Prerequisite: Working knowledge of basic algebra and ENGL 098. (SCC, SFCC)

GEOL 116 — Environmental Geology (5 cr)
An introduction to environmental geology including geologic processes and land forms. An emphasis on practical applications using case history studies involving engineering and environmental problems as they relate to geologic settings. (SCC, SFCC)

GEOL 201 — The Earth Through Time (5 cr)
The course is an overview of earth's geologic history through time. Topics of discussion include the geologic formation of earth and its rock types, as well as the evolution of lifeforms through time. The effects of plate tectonics on paleoclimates, paleogeographies, and evolutionary patterns for the major continental and marine ecosystems are considered. Meets A.A. degree lab science requirement. Prerequisite: GEOL& 101, 100 or 1 year of high school science. (SCC)

GEOL 210 — Pacific Northwest Geology (5 cr)
An overview of the geologic history of the Pacific Northwest. Emphasis is on the plate tectonic relationships between the various geologic regions of the Northwest via hands-on interpretations of rocks, geologic maps and field observations. Prerequisite: GEOL& 101 (formerly GEOL 101) or permission of instructor. (SCC)

GERMAN

GERM& 121 — German I (5 cr)
Introduction to German culture with emphasis on conversation with some writing. (SCC, SFCC)

GERM& 122 — German II (5 cr)
Introduction to German culture with emphasis on conversation with some writing. Prerequisite: GERM& 121 or equivalent. (SCC, SFCC)

GERM& 123 — German III (5 cr)
Introduction to German culture with emphasis on conversation with some writing. Prerequisite: GERM& 122 or equivalent. (SCC, SFCC)

GERM 141 — German Conversation and Culture (5 cr)
This course accommodates students with individual language needs. Through conversation, supplementary readings, writing and individual projects in German, students expand the study of culture, civilization and contemporary life of German speaking people. Conducted in German. Prerequisite: One year of college German or permission of instructor. (SCC)

GERM 241 — German Conversation and Culture (5 cr)
This course accommodates students with individual language needs. Through conversation, supplementary readings, writing and individual projects in German, students expand the study of culture, civilization and contemporary life of German speaking people. Conducted in German. Prerequisite: Two years of college German or permission of instructor. (SCC)

GERONTOLOGY PARAPROFESSIONAL

HSGER 101 — Introduction to Social Gerontology (5 cr)
Introduction to the theories of ageism created and institutionalized by many forces--historical, social, cultural and psychological. Emphasis on the study, research and practicalities of serving the needs of the elderly in contemporary American society. (SFCC)

HSGER 110 — Leisure, Learning, and Living (5 cr)
General data and observations as philosophy, trends and research in the leisure field; directed theoretical analysis of these studies as they pertain to the aging person; and contact with observations, progress visits, interviews and reports are addressed in this course. (SFCC)

HSGER 115 — Multi-Cultural Perspectives in Human Services (5 cr)
This course explores the experiences of minority cultures within the context of human services. Emphasis on investigating how each of the subcultures imposes its own distinctive normative structure on the individual, and the implications of cultural background on the planning and delivery of human services is addressed. (SFCC)

HSGER 201 — Aging and Personality (5 cr)
Personality theory and concepts of adjustment in terms of normal and pathological aging, and an overview of rehabilitative efforts with the aged. (SFCC)

HSGER 210 — Aging and Mental Health (5 cr)
An introduction to the theory and skills of aging and mental health as related to the aging process. As the aging process develops, several environmental changes occur that bring about physiological and psychological changes in some elderly persons. Students study the biological determinants, the speed of normal behavioral changes with age, the awareness of dysfunctions and senile dementia of the Alzheimer's type. (SFCC)

HSGER 221 — Counseling the Aging (5 cr)
Counseling techniques to assist the elderly in preretirement or rehabilitative services. Students may observe counseling activities, provide direct counseling, plan or implement a counseling service, or evaluate an existing service, depending on their level of skill. (SFCC)

HSGER 250 — Death, Loss and Grief (5 cr)
Designed to better understand death in its relationship to life through the exploration of what others have written about death and by examining one's own feelings about death and dying. We discuss and explore the death taboo; loss, grief, mourning, pain and the impact of the dying process; the helping professions; and the family and the dying person. (SFCC)

GOVERNMENT, STUDENT

GOVT 161 — VICA Seminar (1 cr)
Conference course for students in the VICA program or similar groups; leadership and organization structure in student activities; applying for and holding a job, employee-employer relations; personal achievement; and the challenge of leadership. (SCC)

GOVT 191 — Student Senate (1 cr)
The responsibilities of the decision-making process of student government with emphasis on human relations, group interaction, developing the human potential of the individual, and improving communication skills and decision-making abilities. Open to all students interested in the student government process. (SCC, SFCC)

GOVT 192 — Student Senate (1 cr)
The responsibilities of the decision-making process of student government with emphasis on human relations, group interaction, developing the human potential of the individual, and improving communication skills and decision-making abilities. Open to all students interested in the student government process. (SCC, SFCC)

GOVT 193 — Student Senate (1 cr)
The responsibilities of the decision-making process of student government with emphasis on human relations, group interaction, developing the human potential of the individual, and improving communication skills and decision-making abilities. Open to all students interested in the student government process. (SCC, SFCC)

GOVT 195 — Activities Board (1 cr)
Responsibilities of program management through representative student government; emphasis on program development for the college, group interaction, communication skills and decision-making abilities. For members of student clubs and organizations and students interested in program development and scheduling management. (SCC, SFCC)

GOVT 196 — Activities Board (1 cr)
Responsibilities of program management through representative student government; emphasis on program development for the college, group interaction, communication skills and decision-making abilities. For members of student clubs and organizations and students interested in program development and scheduling management. (SCC, SFCC)

GOVT 197 — Activities Board (1 cr)
Responsibilities of program management through representative student government; emphasis on program development for the college, group interaction, communication skills and decision-making abilities. For members of student clubs and organizations and students interested in program development and scheduling management. (SCC, SFCC)

GRAPHIC DESIGN

GRDSN 101 — Design Process I (4 cr)
This is a basic introduction course presenting the fundamentals of design, visual communication and conceptualization. The primary focus is on typography, color and composition. Activities focus on research and problem solving with an emphasis on idea generation and refinement using thumbnail and rough layouts. Students apply fundamental design and communication skills to projects in GRDSN 103. Prerequisite: Compass Reading 80 or higher; ASSETT Reading 40 or higher; or permission of the instructor. (SFCC)

GRDSN 102 — Design Technology I (3 cr)
This course is a basic introduction to the technology platform used in the design profession. Emphasis is on the operating system(s), computer operations, file types, format and management. Students learn fundamental software skills necessary to complete design projects. Content includes operation of page layout, drawing and scanning software applications. Prerequisite: Assessment reading score on the Compass of 80 or above or an ASSETT reading score of 40 or above and concurrent enrollment in GRDSN 101 or permission of instructor. (SFCC)

GRDSN 103 — Design Projects I (1 cr)
Students in this course design and produce basic-level design projects. Projects are assigned, assessed at midpoint and critique when finished. The design process, technology and lab time for these projects are delivered in GRDSN 101, 102. Prerequisite: A COMPASS reading assessment score of 80 or above or an ASSET reading score of 40 or above and concurrent enrollment in GRDSN 101, 102, 105 or permission of instructor. (SFCC)

GRDSN 105 — Drawing for Graphic Designers (3 cr)
This course offers students an introduction to drawing as a graphic designer. Students learn to draw basic forms for thumbnails and roughs that can be applied to other graphic design courses. Techniques and tools for drawing shape, value, plane and volume are explored through gesture, contour and other drawing styles. Composition and drawing type are an integral part of the course. (SFCC)

GRDSN 109 — History of Design (5 cr)
This course focuses on major design movements as they relate to visual communication. Beginning with the invention of writing and continuing to present- day key ideas, social/political/cultural developments and technologies are examined. Through observations and comparisons, the course illustrates the relationships between various design disciplines. This course requires research, writing and presentation of exploring visual communications role in society and popular culture. Prerequisite: A Compass reading assessment score of 80 or above or an ASSET reading score of 40 or above. (SFCC)

GRDSN 111 — Design Process II (4 cr)
This course expands on the fundamentals of design, visual communication and conceptualization introduced in GRDSN 101. Students demonstrate skills at a higher level of performance. In addition to typography, color and composition, students are engaged in problem-solving and critical thinking activities in order to solve fundamental design problems. Prerequisite: GRDSN 101, 102 or permission of instructor. (SFCC)

GRDSN 112 — Design Technology II (3 cr)
This intermediate-level course focuses on the technology platform used in the design profession. Emphasis is on computer graphics software applications, type formatting and appropriate file construction. Students learn fundamental and intermediate software skills necessary to complete projects in GRDSN 113. In addition to page layout, drawing and software applications, students focus on fundamental photo manipulation and three-dimensional design software. Prerequisite: Assessment reading score on the Compass of 80 or above or an ASSETT reading score of 40 or above. (SFCC)

GRDSN 113 — Design Projects II (1 cr)
In this course, students design and produce basic-level design projects with more complexity than in previous projects. Projects are assigned, assessed at midpoint and critiqued when finished. The design process, technology and lab time for these projects are delivered in GRDSN 111, 112. Prerequisite: GRDSN 101, 102, 103 and concurrent enrollment in GRDSN 111, 112, 115 or permission of instructor. (SFCC)

GRDSN 115 — Drawing for Communication (2 cr)
This course builds on the skills obtained in GRDSN 105. Students expand their knowledge on techniques for illustration, draw in perspective, and learn about the picture plane, theme building and visual analogy. Color and its effect on composition and the target market are explored. Professional hand skills for presentation are included. Prerequisite: GRDSN 105. (SFCC)

GRDSN 121 — Design Process III (4 cr)
In this course, students apply the design process to the print, web and multimedia industries. Students engage in intermediate-level design, communication, problem-solving and conceptualization activities. In addition to exploring strategies for communicating more complex information, students are engaged in creating concepts which communicate ideas with clarity, depth and uniqueness. Prerequisite: GRDSN 111, 112 or permission of the instructor. (SFCC)

GRDSN 122 — Design Technology III (3 cr)
This course is a survey of design technology as it applies to the production of design work in print, web and multimedia. Emphasis is on file construction, file formats and software used in 2-D, 3-D and animated graphics. Students are introduced to the Postscript imaging process and HTML as well as web and multimedia authoring software. Prerequisite: GRDSN 112 or permission of instructor. (SFCC)

GRDSN 123 — Design Projects III (1 cr)
Students design and produce basic-level design projects with more complexity than GRDSN 113. Projects are assigned, assessed at midpoint and critiqued when finished. The design process, technology and lab time for these projects are delivered in GRDSN 121, 122. Prerequisite: GRDSN 103 or permission of instructor and concurrent enrollment in GRDSN 121, 122 or permission of instructor. (SFCC)

GRDSN 125 — Computer Drawing (3 cr)
Students learn to execute drawings using vector and raster imaging often found as illustrations in print and web design. Software programs are used to show value, color and texture of subject matter. Use of an electronic pen tool is explored in place of the mouse to mimic traditional tools that show line quality and shading. In addition, students use a digital camera to produce photographs for compositions and learn how to show perspective through the software programs available. Prerequisite: GRDSN 105 or permission of instructor. (SFCC)

GRDSN 126 — Web Production (2 cr)
This course is designed to explore the visual aspects of designing and implementing documents for the World Wide Web. It focuses on evaluating the aesthetics and readability of existing Web pages in order to formulate effective and appropriate approaches to design for new pages. Students create, scan and manipulate graphic images, as well as integrate final graphics files into effective page designs which are appropriate for web use. Prerequisite: GRDSN 158 or permission of instructor. (SFCC)

GRDSN 129 — Digital Studio (2 cr)
This course explores creative uses of the application "Photoshop" by using the tools that students might employ to enhance their artwork and the ability to submit work to a potential employer or gallery or jury show. Through the use of digital imaging, filters, and image manipulation, students make prints using inkjet printers on a variety of substrates. Presentation and submission for juried exhibitions is discussed. Photos will be taken for use in projects along with student artwork created in other disciplines. (SFCC)

GRDSN 142 — Print Production (4 cr)
This an intermediate level course in computer graphics and printing technology. Projects involve using industry-standard computer applications to create and edit pixel and vector images, create page layouts, and prepare files for printing. Emphasized are color management, printing technology, file preparation for multiple color printing, Acrobat PDF workflow, raster image processing, cross-application data exchange and file troubleshooting. Prerequisite: GRDSN 121 or permission of the instructor. (SFCC)

GRDSN 151 — Typography and Layout (3 cr)
This course introduces students to the history, nomenclature and practical application of typography.
Projects range from simple typographic compositions to complex multi-page documents in print and digital media.
In addition to conventional type formatting, students will explore creative solutions using type as expressive visual form.
Prerequisite: GRDSN 101, 102 or permission of instructor. (SFCC)

GRDSN 156 — Illustrator I (2 cr)
This is a self-paced, competency-based, introductory course to illustrator software for Macintosh computers. Through reference materials, tutorial exercises and projects, students use software tools and menu commands to trace, draw and manipulate Bezier curves, and create illustrations. Students manipulate graphics and typographic forms to create final drawing compositions. Students also control and manipulate visual attributes and work with several color models to create, mix, and apply colors and tints. (SFCC)

GRDSN 158 — PhotoShop I (2 cr)
This is a self-paced competency-based introductory course to PhotoShop software for Macintosh computers. Through reference materials, tutorial exercises and projects, students use software tools and menu commands to evaluate and control color characteristics of digitized photographic images. Students also combine and manipulate images to create unique photo composites, as well as work with several color models and a variety of file formats. (SFCC)

GRDSN 160 — Director (2 cr)
This is a self-paced, competency-based, introductory course to Director software for Macintosh computers. Through reference materials, tutorial exercises and projects, students use software tools and menu commands to create a movie (multimedia piece). Students import files created in other software programs, create text, and add sound and special effects. In addition, the students make a file interactive. The animated pieces will be suitable for use in multimedia design and CD ROM. (SFCC)

GRDSN 162 — MacIntosh OS X (2 cr)
This is a self-paced, competency-based computer course designed to provide students with knowledge and hands-on experience with Macintosh Operating System Ten. Students receive information on functions such as the desktop, using Internet browsers, e-mail and printing. (SFCC)

GRDSN 163 — InDesign I (2 cr)
This self-paced competency based hands-on computer course provides students with knowledge and experience with the InDesign page layout program. The course includes working with documents, text, styles, tables, graphic elements, and color. (SFCC)

GRDSN 164 — Illustrator II (2 cr)
This is a self-paced, competency-based, advanced course for Adobe Illustrator software for Macintosh computers. Through reference materials, tutorial exercises and projects, students use software tools and menu commands. They use advanced text techniques, selection techniques and transformation techniques to create vector drawings. They also learn to prepare graphics for the Web. (SFCC)

GRDSN 166 — PhotoShop II (2 cr)
This course offers self-paced, competency-based, advanced instruction in PhotoShop software for Macintosh computers. Through reference materials, tutorial exercises and projects, students use software tools and menu commands to select color mode, correct color, apply masks and channels, create complex layers, retouch images, create patterns and textures, and add special effects. (SFCC)

GRDSN 167 — Fireworks (2 cr)
This self-paced competency based hands-on computer course provides students with knowledge and experience with the Fireworks Web design program. Students work with text, bitmaps, image retouching, layers, animated GIFs, navigation bars and pop-up menus. (SFCC)

GRDSN 168 — InDesign II (2 cr)
This self-paced competency based hands-on computer course provides students with knowledge and experience with the InDesign page layout program. The course includes working with long documents, multiple documents, advanced typesetting, managing output, PDF, and HTML. (SFCC)

GRDSN 171 — Flash (2 cr)
This course offers a self-paced, competency-based introduction to flash software for Macintosh computers. Through reference materials, tutorial exercises and projects, students use software tools and menu commands to produce high impact, vector-based web sites. Students use Flash to create animations and interfaces, adding sound, motions and interactivity. (SFCC)

GRDSN 172 — Dreamweaver (2 cr)
This course offers a self-paced, competency-based introduction to Dreamweaver software for Macintosh computers. Through reference materials, tutorial exercises and projects, students use software tools and menu commands to create exciting web sites using HTML. Students also use design tools, and import and edit images and documents. (SFCC)

GRDSN 173 — Flash II (2 cr)
This is a self-paced competency-based course in Flash software for Macintosh computers. Through reference materials, tutorial exercises and projects, students use software tools and menu commands to create web animations that include sound and video. Students learn to apply behaviors to their animations. They also learn to use Flash with other applications such as Freehand, Photoshop and Fireworks. (SFCC)

GRDSN 174 — Dreamweaver II (2 cr)
This is a self-paced competency-based course in Dreamweaver software for Macintosh computers. Through reference materials, tutorial exercises and projects, students use software tools and menu commands to create cascading style sheets, JavaScript behaviors and animations. Students learn to manage a live web site. (SFCC)

GRDSN 175 — After Effects Flash II (2 cr)
This is a self-paced competency-based course in After Effects Flash software for MacIntosh computers. Through reference materials, tutorial exercises and projects, students use software tools and menu commands to create, manipulate web animations that include sound and optimize motion graphics for film, video and the web. Students produce and apply behaviors to their animations, special effects and 3D layers. They use Flash with applications such as Freehand, Photoshop and Fireworks. (SFCC)

GRDSN 176 — Introduction to Page Design (2 cr)
This course introduces students to the fundamentals of newspaper, magazine and web design for news publications. The course emphasizes newspaper page design as the basis for all news-driven print media, such as magazines, daily newspapers, and alt-weekly newspapers. Students will learn to present information in a clear, concise manner. Prerequisite: GRDSN 163 or permission of instructor. (SFCC)

GRDSN 181 — Web Development I (4 cr)
Students are introduced to design and construction of web pages using HTML (Hypertext Markup Language), CSS (Cascading Style Sheets) and JavaScript. Students learn standards-based web development. Cascading style sheets are used in designing and structuring effective and accessible web pages for browsers and mobile devices. (SFCC)

GRDSN 182 — Web Development II (3 cr)
This intermediate course builds off of the Web Development I course. Students apply server / client side programming to create dynamic web pages. Students design and build web / mobile web projects using JavaScript and other scripting languages. Prerequisite: GRDSN 181. (SFCC)

GRDSN 200 — Graphic Design Workshop (1-5 cr)
A course offered when unique opportunities or needs arise to instruct in areas not covered by existing courses and/or to quickly respond to changing conditions in the graphic design industry. (SFCC)

GRDSN 201 — Design Process IV (4 cr)
In this course, students compare the design process as it applies to a wide range of computer-generated imagery. Students engage in intermediate-level design, communication, problem-solving and conceptualizing activities. Prerequisite: GRDSN 211 or permission of instructor. (SFCC)

GRDSN 202 — Design Technology IV (3 cr)
Students explore the production aspects of realistic graphic design projects and the technical issues that develop within their own designs. In conjunction with GRDSN 203, students develop production techniques and solutions to various media. Prerequisite: GRDSN 122 or permission of instructor. (SFCC)

GRDSN 203 — Design Projects IV (1 cr)
This course consists of intermediate-level design, industry-driven projects. Skills necessary to complete these projects are directly linked to GRDSN 201 and 202. Focus is on design principles which relate to various digital media applications. Prerequisite: GRDSN 123 or permission of instructor and concurrent enrollment in GRDSN 201, 204 or permission of instructor. (SFCC)

GRDSN 204 — Design Lab IV (2 cr)
Students perform the computer production of projects assigned in GRDSN 203. Focus is on demonstrating efficient and effective use of technology in the design production process. Students are assessed and graded on demonstrating self-directed learning, demonstrating effective time management and positive work ethic. This lab course is facilitated by graphic design faculty. Prerequisite: Permission of instructor and concurrent enrollment in GRDSN 201, 202, 203. (SFCC)

GRDSN 211 — Design Process V (4 cr)
Working with real-world design problems, students apply their expertise in developing design solutions for various media. Emphasis is on organizing information, typography and imagery to create clear, creative design solutions. Prerequisite: GRDSN 201 or permission of instructor. (SFCC)

GRDSN 212 — Design Technology V (3 cr)
A variety of technical and material processes driven by projects developed in GRDSN 213 are explored. This course strengthens the students' abilities to problem solve and develop technical solutions to various media production applications. Students use a variety of computer software applications which are determined by appropriate media delivery systems. Prerequisite: GRDSN 202 or permission of instructor. (SFCC)

GRDSN 213 — Design Projects V (1 cr)
From concept to final presentation, students in this course apply advanced-level design principles to real-world projects. Linked to GRDSN 211 and GRDSN 212, assignments require strong visual concepts. This course is designed to increase awareness of advanced graphic design projects. Prerequisite: GRDSN 201, 202, 203, 204 or GRDSN 126, 238 and concurrent enrollment in GRDSN 211, 212, 214 or permission of instructor. (SFCC)

GRDSN 214 — Design Lab V (2 cr)
Students perform the computer production of projects assigned in GRDSN 213. Scheduling and coordinating multiple tasks, as well as meeting deadlines, is emphasized. Students are assessed and graded on demonstrating self-directed learning, demonstrating effective time management and positive work ethic. This lab course is facilitated by graphic design faculty. Prerequisite: GRDSN 201, 202, 203, 204 or permission of the instructor and concurrent enrollment in GRDSN 211, 212, 213. (SFCC)

GRDSN 215 — Web Process V (3 cr)
Working with real-world design problems, students apply their expertise in developing design solutions for the web. Emphasis is on organizing information, typography and imagery to create clear, creative design solutions. Through problem-solving activities, students develop an increased awareness of web design principles and skills. Prerequisite: GRDSN 121, 122, 123 and concurrent enrollment in GRDSN 216, 217, 218. (SFCC)

GRDSN 216 — Web Technology V (3 cr)
A variety of technical and material processes driven by projects developed in GRDSN 217 are explored. This course strengthens the students' abilities to problem solve and develop technical solutions to various web production applications. Students use a variety of computer software applications which are determined by appropriate web delivery systems. Prerequisite: GRDSN 121, 122, 123 and concurrent enrollment in GRDSN 215, 217, 218. (SFCC)

GRDSN 217 — Web Projects V (1 cr)
From concept to final presentation, students in this course apply advanced-level design principles to real-world projects. Linked to GRDSN 215 and 218, assignments require strong visual concepts. This course is designed to increase awareness of advanced web design projects. Prerequisite: GRDSN 121, 122, 123 and concurrent enrollment in GRDSN 215, 216, 218. (SFCC)

GRDSN 218 — Web Lab V (2 cr)
Students perform the computer production of projects assigned in GRDSN 217. Scheduling and coordinating multiple tasks, as well as meeting deadlines, are emphasized. Students are assessed and graded on demonstrating self-directed learning, effective time management and a positive work ethic. Graphic design faculty facilitate this lab course. Prerequisite: GRDSN 121, 122, 123 and concurrent enrollment in GRDSN 215, 216, 217. (SFCC)

GRDSN 221 — Design Process VI (4 cr)
This course prepares students for entrance into the workforce. Students self-assess projects and identify weak points in their design projects in order to be more competitive when entering the job market. Students redesign work to bring it up to professional portfolio standards. In addition, students create new portfolio projects. Prerequisite: GRDSN 211 or permission of instructor. (SFCC)

GRDSN 223 — Design Portfolio (3 cr)
This course prepares student for entry-level employability. Students create a resume, cover letter, personal brand and a professional portfolio of their best work. Additionally, students create an multi-media marketing campaign, promoting their qualifications to design industry employers. Prerequisite: GRDSN 211 or permission of instructor. (SFCC)

GRDSN 224 — Design Lab VI (2 cr)
Students produce final design pieces to assemble into a portfolio. The focus of the lab activities is accelerating the work pace to meet the kinds of deadlines experienced in industry. Students are assessed and graded on demonstrating self-directed learning, demonstrating effective time management and positive work ethic. Prerequisite: GRDSN 214 or permission of instructor and concurrent enrollment in GRDSN 221, 223 or permission of instructor. (SFCC)

GRDSN 225 — Web Process VI (3 cr)
This course prepares students for entrance into the work force. Students address employment opportunities, self-assess projects and identify weak points in their portfolios in order to be competitive when entering the job market. In addition to assembling a portfolio, students gain practice in job interviewing, resume preparation and professional job application procedures. Prerequisite: GRDSN 215, 216, 217, 218 and concurrent enrollment in GRDSN 226, 227. (SFCC)

GRDSN 226 — Web Projects VI (2 cr)
Students design and produce projects for their portfolios in this course. In addition, earlier student work is assessed and revised to meet portfolio standards. Projects are assigned, assessed at midpoint and critiqued when finished. The design process and lab time for these projects are delivered in GRDSN 225 and 227. Prerequisite: GRDSN 215, 216, 217, 218 and concurrent enrollment in GRDSN 225, 227. (SFCC)

GRDSN 227 — Web Lab VI (2 cr)
Students produce final design pieces to assemble into a portfolio. The focus of the lab activities is accelerating the work pace to meet the kinds of deadlines experienced in industry. Students are assessed and graded on demonstrating self-directed learning, effective time management and a positive work ethic. Prerequisite: GRDSN 215, 216, 217, 218 and concurrent enrollment in GRDSN 225, 226. (SFCC)

GRDSN 235 — Multimedia Technology I (3 cr)
This course is a basic introduction to interactive media. Students learn basic design and technical skills necessary to create and combine graphics, text, sound, Quicktime movies and scripting in interactive pieces for use on a CD or the Internet. Emphasis is on organization and flow of information. Prerequisite: GRDSN 122 or permission of instructor. (SFCC)

GRDSN 236 — Multimedia II (3 cr)
Students learn to create interactive media at an intermediate level. Students learn design and technical skills necessary to create and combine text, graphics, video and audio for digital distribution. Prerequisite: GRDSN 235 or permission of instructor. (SFCC)

GRDSN 237 — Multimedia III (3 cr)
Students learn to create interactive media at an advanced level. Students learn design and technical skills necessary to create and combine text, graphics, video and audio for digital distribution. Prerequisite: GRDSN 236 or permission of instructor. (SFCC)

GRDSN 238 — 3-D Modeling and Animation I (3 cr)
This course is a basic introduction to the field of three-dimensional modeling and animation. Students learn to create simple three-dimensional objects on the computer and animate them as Quicktime movies. Emphasis is on the analysis of perspective, three-dimensional space, lighting, cameras and texture mapping. (SFCC)

GRDSN 239 — 3-D Modeling and Animation II (3 cr)
This is an intermediate-level course in three-dimensional modeling and animation. Students learn to create more complex three-dimensional objects on the computer and animate them as Quicktime or VRML movies. Emphasis is on intricate lighting, camera and texture creation techniques. Prerequisite: GRDSN 238 or permission of instructor. (SFCC)

GRDSN 240 — 3-D Modeling and Animation III (3 cr)
This is an advanced-level course in three-dimensional modeling and animation. Students learn to create complex three-dimensional objects on the computer and animate them as Quicktime or VRML movies. Prerequisite: GRDSN 239 or permission of instructor. (SFCC)

GRDSN 266 — Cooperative Education Seminar (1-2 cr)
For course description, see Cooperative Education. (SFCC)

GRDSN 267 — Cooperative Education Work Experience (1-18 cr)
For course description, see Cooperative Education. (SFCC)

GUIDANCE

GUID 100 — College Orientation (1-2 cr)
This course is designed to assist the incoming student make the transition to college life. It provides a number of tools necessary to succeed in college - resources, processes and procedures, career exploration and information, assertiveness training and college survival skills - as well as explain the many services and activities open to all students. (SCC, SFCC)

GUID 101 — Career Planning (2-5 cr)
This course incorporates aptitude, interest, personality and motivational surveys with classroom activities to promote self-awareness. Analysis of the organization of the working world and use of research materials is combined with decision-making skills to aid the student in the selection of a career. Course content varies depending on the number of credits chosen. (SCC, SFCC)

HEALTH

HLTH 101 — Health and Wellness (3 cr)
Course encompasses a total wellness concept of one's physical, mental and emotional well-being. Students examine major health issues of contemporary society. Students also learn to make responsible lifestyle decisions that directly affect their quality of life and attainment of well-being. (SCC, SFCC)

HLTH 104 — Stress Management (3 cr)
Students learn techniques and strategies to manage and evaluate stress. Consequences of stress to physical and mental health are emphasized. Techniques of bio-feedback and relaxation responses are covered, as well as wellness lifestyle development. General applications for physiological arousal and behavior-change interventions are covered. (SCC, SFCC)

HLTH 174 — First Aid (3 cr)
Principles, theory and skills of standard first aid and safety which prepare students to make appropriate decisions regarding first aid care and to act on those decisions. American Red Cross cards are available upon successful completion of this course. (SCC, SFCC)

HEALTH EDUCATION

HED 103 — Steps to Success in Health Careers (4 cr)
This course provides students with a key to understanding the necessary components for success in a health career introducing various options available with emphasis on necessary abilities to assure success in the education aspects of the profession. Strategies to build professional attitudes, self esteem, ethical behavior and communications skills are presented. (SCC)

HED 104 — Medical Terminology and Anatomy (5 cr)
Students are introduced to the unique language of medicine emphasizing basic medical word structure and commonly used clinical terms. An overview of normal anatomy and anatomic terms is accomplished prior to a study of common diseases and disorders of the human body with a system-by-system approach. (SCC)

HED 105 — Medical Terminology and Anatomy (5 cr)
This course emphasizes the unique language of medicine, normal anatomy and function, and disease and disorders of the body with a system-by-system approach. Prerequisite: HED 104 or permission of instructor. (SCC)

HED 106 — Disease Processes (5 cr)
Students study common diseases and conditions including prevention etiology, signs and symptoms, diagnostic and treatment modalities, prognoses, and the use of medical references for research and verification. Prerequisite: HED 104 and 105 or permission of instructor. (SCC)

HED 108 — Human Anatomy (5 cr)
Students study the structure of the human body systems: Integumentary, special senses, skeletal, muscular, respiratory, hemopoietic, cardiovascular, lymphatic, digestive, urinary, reproductive, endocrine and nervous systems. (SCC)

HED 109 — Human Physiology and Disease (5 cr)
Students study functions, related conditions and diseases of body systems. Prerequisite: HED 108 or permission of instructor. (SCC)

HED 121 — Cultural Diversity in Health Care (1 cr)
This course provides a foundation for applications of cultural concepts in the health care setting. Considerations are given to the impact of biopsychosocial, ethical, legal, spiritual and cultural influences on the need to promote, maintain and restore health of the client/family unit. Prerequisite: Permission of instructor or concurrent enrollment in a health care program. (SCC)

HED 125 — Medical Terminology (5 cr)
This course introduces the roots, prefixes and suffixes comprising the structure of medical terms associated with all body systems with emphasis on medical eponyms, abbreviations and the correct spelling of all terms. (SCC)

HED 126 — Introduction to Study of Disease (3 cr)
This course introduces the concepts associated to the cause of disease, inflammation and repair, burns, infection, genetics, organs of special sense and neoplasia. Diagnostic tests and procedures related to the identification of the disease process are included. Prerequisite: BIOL& 241, 242 and HED 125 or HED 108. (SCC)

HED 129 — Pathophysiology (5 cr)
Students study various disease causing processes exerting an effect on normal physiological function of musculoskeletal, respiratory, circulatory, digestive, urinary and nervous systems; neoplasia and immunology. Diagnostic tests and procedures utilized for these pathophysiological problems are presented, and appropriate treatment is discussed. (SCC)

HED 132 — Ethics and Professionalism in Health (2 cr)
Students develop intrapersonal and interpersonal communication skills for use in their professional health care roles. The ability to use judgments in ethical and moral decisions in health, stress management and interviewing skills as they relate to professional practice for selling oneself, and maintaining employer-employee relationships are emphasized. (SCC)

HEALTH INFORMATICS

HIIM 159 — Health Care Terminologies, Vocabularies, and Classifications (4 cr)
This course provides an explanation of specific terminology used by workers in health care. Current clinical terminologies, vocabularies, and classifications are covered in this course, including SNOMED CT, ICD, and LOINC. (SCC)

HIIM 163 — Theory and Application of Health Informatics (4 cr)
This course is an introduction to health IT standards, health-related data structures, software applications, enterprise architecture in health care and public health organizations. Students will work with a simulated EHR system. While playing the role of practitioners using these systems, they will learn what is happening "under the hood." Students will experience threats to security and appreciate the need for standards, high levels of usability, and how errors can occur. (SCC)

HIIM 164 — Health Information Exchange and Workflow Analysis (4 cr)
This course includes an in-depth analysis of data mobility including the hardware infrastructure, the ISO stack, standards, Internet protocols, federations and grids, the NHIN and other nationwide approaches. Additionally, fundamentals of health workflow process analysis and redesign will be discussed as a necessary component of complete practice automation. The topics of process validation and change management will also be covered. (SCC)

HIIM 165 — Quality Improvement in Health Informatics (2 cr)
This course introduces the concepts of health IT and practice workflow redesign as instruments of quality improvement. Establishing a culture that supports increased quality and safety will also be addressed. Discussion of approaches to assessing patient safety issues and implementing quality management and reporting through electronic systems will be covered. (SCC)

HIIM 167 — Health Informatics Usability (2 cr)
This course will discuss rapid prototyping, user-centered design and evaluation, and usability. Students will understand the effects of new technology and workflow on downstream processes. This course will also focus on facilitation of a unit-wide focus group or simulation. (SCC)

HEALTH INFORMATION TECHNOLOGY

HIT 101 — Health Record Systems (5 cr)
Students are introduced to health records and health record personnel. The study of development, content and format of acute care record systems is emphasized. Students conduct quantitative and qualitative analysis of records according to standards. Acute care hospital-based systems and the role of admission services in initiation of records are addressed. Application of computer systems in a database, analysis of record content and record management are presented. (SCC)

HIT 104 — Introduction to Health Information (3 cr)
Students are introduced to the health information field, health professions and the medical field. The value of health information and terminology, facility organization, regulatory agencies, and the roles and functions of health information personnel are emphasized. (SCC)

HIT 105 — Legal Concepts in Health (3 cr)
This interdisciplinary health records course emphasizes the health record as a legal document. Confidential communication policies and procedures, release of information, consent and state and federal law pertaining to health are presented. Forms of liability, preparation of records for court responses and to subpoenas are emphasized. Students research laws, current and proposed health legislation, and contemporary legal issues. (SCC)

HIT 120 — Medical Assistant Coding and Reimbursement (3-5 cr)
Medical insurance terminology and billing procedures are covered in this course. Students learn to use the CPT and ICD-9-CM for basic ambulatory care setting coding needs. Legal and ethical issues regarding insurance billing also are covered. Prerequisite: Successful completion of MA 101, 102, 111, 112 and concurrent enrollment in MA 122, 125. (SCC)

HIT 125 — Medical Terminology (5 cr)
Students learn the roots, prefixes and suffixes comprising the structure of medical terms associated with all body systems. Medical eponyms, abbreviations and correct spelling of all terms are emphasized. (SCC)

HIT 135 — Comparative Record Systems (4 cr)
Record systems in all types of nonacute health care settings are presented including ambulatory care, home health, hospice, mental health and long-term care. Regulatory issues, documentation requirements and information management issues unique to each setting are discussed. Prerequisite: HIT 101. (SCC)

HIT 145 — Pharmacology (3 cr)
Drug classifications, apothecary and metric systems of measurement, medications by brand name and generic terms, and use of PDR and hospital formularies are addressed in this course. (SCC)

HIT 160 — Computer Theory in Health Information (3 cr)
Computer theories specific to the field of health information are introduced in this course. Confidential communication policies and procedures, release of information consent, and state and federal law pertaining to health are presented. Forms of liability, preparation of records for court and responses to subpoenas are emphasized. Students research laws, current and proposed health legislation, and contemporary legal issues. (SCC)

HIT 161 — Health Management Information Systems (3 cr)
This course is a continuation of the concepts introduced in HIT 160. Emphasis is on the use of tasks, steps and domains frequently used in the software programs currently used in the medical industry. Prerequisite: HIT 160 or permission of instructor. (SCC)

HIT 162 — Electronic Health Record: Meditech (3 cr)
This course is a continuation of the concepts introduced in HIT 160 and 161. Emphasis is on advanced special functions such as non-central databases and sorting and statistical functions using electronic health records software. Students will obtain a certificate of completion in the following meditech modules: Order Entry, Order Management, Patient Care Inquiry, Admitting, and Medical Records. Prerequisite: HIT 161 or permission of instructor. (SCC)

HIT 203 — Clinical Practice (1-3 cr)
This clinical practicum provides actual on-site practice in skills required in medical coding, chart analysis and basic medical record proficiency. Students apply skills practiced in the directed practice lab while integrating knowledge with application. Prerequisite: Second-year health information technology student and concurrent enrollment in HIT 212. (SCC)

HIT 208 — Health Information Management (5 cr)
Students learn management of health data, special registries and indexes, data quality, and the uses of aggregate data. They study abstracting systems, current regulations that govern prospective payment and health care financing. The role of regulatory agencies is included, and the dynamics of change in the health information environment is presented. Contemporary topics in health information management are discussed. Prerequisite: HIT 212 and concurrent enrollment in HIT 211. (SCC)

HIT 209 — Health Data Analysis and Display (5 cr)
Students learn the principles in collection, computation, presentation and analysis of health data by working with simulated applications of data collection principles by data abstracting using computerized health information systems. Presentation and analysis of data using computer applications are addressed. Prerequisite: Completion of all first-year requirements. (SCC)

HIT 211 — Quality Improvement (4 cr)
Students learn principles and procedures pertaining to utilization management, quality assurance and improvement, credentialing and risk management. Knowledge and skills necessary to apply the principles in assessing the quality of patient care are emphasized. Research and simulation are used to acquaint students with quality assurance principles and methods. Selected classification systems are addressed. Prerequisite: Completion of all first-year requirements and concurrent enrollment in HIT 208. (SCC)

HIT 212 — Acute Care Coding (5 cr)
Students study theory and application of the current edition of the ICD (International Classification of Disease) authorized for use in the US. Students code utilizing charts and participate in lab exercises. Assignment of diagnosis-related groups and computerized endcoding and grouping are presented using practical computer applications to perform these tasks. Prerequisite: Completion of all first-year requirements or permission of instructor. (SCC)

HIT 213 — Clinical Practice (6 cr)
This supervised, clinical practicum provides students experience in area hospitals, skilled nursing facilities and other health care facilities and agencies. Students work under supervision of facility personnel or the instructor and perform all learned skills in an actual clinical setting. Prerequisite: Clinical status: Final quarter and concurrent enrollment in HIT 240, 250. (SCC)

HIT 214 — Ambulatory Care Coding (5 cr)
Ambulatory coding systems currently in use are utilized in this course. Health Care Financing Administration rules and procedures are emphasized, incorporating Medicare changes and other third-party payers. Current reimbursement methodologies in ambulatory care are presented. Prerequisite: HIT 101, 129, 145, 212 or permission of instructor. (SCC)

HIT 216 — Reimbursement Strategies for HIM Professionals (5 cr)
This course introduces students to a variety of claims processes and procedures, and health care payers. Career roles and responsibilities and employment opportunities also are covered. (SCC)

HIT 218 — Advanced Medical Coding (5 cr)
Students practice using ICD-9-CM (International Classification of Diseases, 9th Edition, Clinical Modification) and CPT (Current Procedural Terminology) by coding inpatient and outpatient source documents and charts. Students learn the implications of DRGs (Diagnostic Related Groups) and APCs (Ambulatory Payment Classifications) and their relationship to coding assignment and finances. The content of this course explains the purpose of manual and computer indexes. Theory and practice in coding problem-solving, data quality control and use of the computer encoder are emphasized. Prerequisite: HIT 212, 214. (SCC)

HIT 240 — HIT Clinical Seminar (2 cr)
In this follow-up seminar of supervised clinical experience, students discuss and report on clinical topics, use of work skills and all aspects of working in the field. Prerequisite: Concurrent enrollment in HIT 213. (SCC)

HIT 250 — Management and Supervision in Health Organizations (3 cr)
Students learn supervisory management theories and techniques. Organizing, directing, motivating, controlling, staffing, evaluating and problem-solving functions are emphasized. The allied health practitioner's role at the midmanagement level is presented. Prerequisite: HIT program students or permission of instructor. (SCC)

HIT 251 — Leadership Applications in Health Information Management (2 cr)
Students develop critical thinking skills in leadership and supervision in health information management in this application-level course. Conflict management, communication skills, inservice education methods and the impact of EEO legislation are emphasized. Analyzing work flow and conducting performance appraisals are addressed. Prerequisite: HIT 208, 250 and concurrent enrollment in HIT 213, 240. (SCC)

HEALTH UNIT COORDINATOR

HUC 101 — Health Record Systems (5 cr)
Students are introduced to health records and health record personnel. The study of development, content and format of acute care record systems is emphasized. Students conduct quantitative and qualitative analysis of records according to standards. Acute care hospital-based systems and the role of admission services in initiation of records are addressed. Application of computer systems in a database, analysis of record content and record management are presented. (SCC)

HUC 104 — Introduction to Health Information (3 cr)
Students are introduced to the health information field, health professions and the medical field. The value of health information and terminology, facility organization, regulatory agencies, and the roles and functions of health information personnel are emphasized. (SCC)

HUC 105 — Legal Concepts in Health (3 cr)
This interdisciplinary health records course emphasizes the health record as a legal document. Confidential communication policies and procedures, release of information, consent and state and federal law pertaining to health are presented. Forms of liability, preparation of records for court responses and to subpoenas are emphasized. Students research laws, current and proposed health legislation, and contemporary legal issues. (SCC)

HUC 108 — Human Anatomy (5 cr)
Students study basic disease concepts relating to the cause of disease, inflammation and repair, burns, infections, genetics, organs of special sense, and neoplasia. Diagnostic tests and procedures related to the identification of the disease process are presented. (SCC)

HUC 120 — Introduction to Health Unit Coordinator Procedures (2 cr)
Health unit coordinator students are introduced to the nursing unit. Professionalism in the working environment is emphasized. Supplies for patient care and computer language required to implement diagnostic testing are addressed. (SCC)

HUC 125 — Medical Terminology (5 cr)
Students learn the roots, prefixes and suffixes comprising the structure of medical terms associated with all body systems. Medical eponyms, abbreviations and correct spelling of all terms are emphasized. (SCC)

HUC 126 — Introduction to Study of Disease (3 cr)
Students study basic disease concepts relating to the cause of disease, inflammation and repair, burns, infections, genetics, organs of special sense, and neoplasia. Diagnostic tests and procedures related to the identification of the disease process are presented. Prerequisite: Completion of HED 108 or 125. (SCC)

HUC 127 — Health Unit Coordinator Procedures (5 cr)
This course is a supervised application of unit coordinator procedures emphasizing transcription of orders and pharmacology. Students learn nursing unit procedures and transcription of orders. They enter HUC 152 during the quarter and must complete this course with a 2.0 grade or better. Prerequisite: Completion of first two quarters. (SCC)

HUC 145 — Pharmacology (3 cr)
Drug classifications, apothecary and metric systems of measurement, medications by brand name and generic terms, and use of PDR and hospital formularies are addressed in this course. (SCC)

HUC 152 — Unit Coordinator Practicum (3 cr)
Students apply skills learned in HUC 127 in a supervised, acute-care clinical rotation. Each student is assigned to a nursing unit under the supervision of a health unit coordinator or nurse manager. Prerequisite: HUC 127. (SCC)

HUC 266 — Cooperative Education Seminar (1-2 cr)
For course description, see Cooperative Education. (SCC)

HUC 267 — Cooperative Education Work Experience (1-18 cr)
For course description, see Cooperative Education. (SCC)

HEALTH/FITNESS TECHNICIAN

FMT 106 — Anatomical and Physiological Kinesiology (5 cr)
A core course to the fitness management curriculum; a study of the structural and functional components of human movement. Special attention is given to the analysis of movement problems. (SFCC)

FMT 111 — Physiology of Exercise (5 cr)
This course explores the range and ability of the human body. Areas of study include brain-body connections; physiological responses of the lungs and heart to exercise; and effects of drugs, hormones and environment on human performance. The training effects of exercise, fatigue, as well as general fitness brought about by regular exercise. In addition, the acute and chronic adaptations to training at altitude will be explored. (SFCC)

FMT 112 — Special Considerations in Exercise (3 cr)
This course analyzes the physiological and psychological characteristics of older adults, adolescents, children, and pre/post natal individuals as they apply to fitness assessment and exercise programming. It also examines the impact of exercise on various conditions such as diabetes, cardiovascular and pulmonary disease, obesity, and musculoskeletal disease. In addition to lecture, lab time is designed to develop "hands-on" knowledge of fitness assessment, exercise technique and related modifications. Prerequisite: FMT 204. (SFCC)

FMT 115 — Leadership Dynamics (3 cr)
This course is designed to study concepts involved in developing leadership traits: When leaders are at their best, what followers expect, and how to enlist others and foster collaboration. In addition, this course studies communication and how it applies to leadership and job-related skills. (SFCC)

FMT 119 — Principles of Strength Training (5 cr)
This course explores the scientific principles involved with increasing human strength. The skeletal muscles and joints are studied. All forms of isotonic and isometric exercise are taught. Effects of nutrition, fatigue and exercise on the muscular system is analyzed. (SFCC)

FMT 204 — Health Appraisal and Exercise Prescription (5 cr)
This course incorporates current fitness industry standards with regards to appropriate assessment techniques, i.e., participant screening, health appraisal, health history, physical assessments, determination of risk factors and lifestyle patterns. Following the comprehensive health/fitness appraisal, techniques for exercise prescription and programming are developed. Components of exercise prescription are incorporated, which include goal setting, strength programming, cardiovascular programming, flexibility, nutrition guidance and behavior modification. Feedback and evaluation methods are developed. (SFCC)

FMT 209 — Exercise and the Cardiovascular System (3 cr)
This course is designed for physical education, health science and fitness management technician majors who have desire to gain basic knowledge of the cardiovascular system at rest, in response to exercise and major disease states. The evaluation of risk factors, fundamentals of electrocardiography, exercise testing techniques, clinical management of major disease states and rehabilitation are discussed. (SFCC)

FMT 219 — Injury Prevention and Rehabilitation (5 cr)
Course is designed to provide the basic knowledge and skills that aid in the prevention and rehabilitation of injuries common in athletic and recreational activities. (SFCC)

FMT 225 — Personal Training (5 cr)
This course enables students to recommend and develop safe exercise routines based on the following processes: 1) health screening, 2) fitness assessments, 3) client goals, 4) client motivation, 5) re-evaluation and 6) education. Students become competent in fitness testing protocols, proper exercise technique, nutrition for weight loss and sports performance; as well as legal, ethical and professional standards currently followed in the fitness industry. Students are prepared to take The American Council or Exercise Personal Trainer Certification exam. (SFCC)

FMT 230 — Therapeutic Massage (3 cr)
Introduces the student to basic techniques of massage. Includes therapeutic applications for sport, stress and clinical practices. Effects of hydrotherapy are covered and the Washington State Massage Act--18.108 RCW is discussed. (SFCC)

FMT 235 — Biomechanics (5 cr)
This course covers the application of the mechanical principles involved in sport and exercise. Students are supplied with basic tools to facilitate the identification, analysis, and solution of problems related to human movement. Topics covered include basic terminology, kinematic and kinetic concepts, linear and angular movement, and equilibrium. (SFCC)

HEARING INSTRUMENT SPECIALIST

HIS 101 — Basic Hearing Instrument Sciences (4 cr)
This course defines, describes and identifies the physical processes of sound and sound amplification. Students in this course discover and learn the development of contemporary hearing instruments from a historical perspective. Students also demonstrate knowledge of hearing instrument components and logically communicate the expected benefits and limitations of various instruments. (SFCC)

HIS 104 — Hearing Physiology and Anatomy (4 cr)
This course describes the function and identifies the structures of the human ear and hearing. Students demonstrate through class discussion and written assignments knowledge of ear physiology and anatomy. (SFCC)

HIS 106 — Healthcare and Business Ethics (4 cr)
In this class students relate and discuss the ethical issues surrounding the performance of their work as hearing instrument specialists. Students class consider and then offer ethical solutions to a variety of possible challenges in their industry. (SFCC)

HIS 123 — Basic Audiometrics (5 cr)
In this course students demonstrate the ability to perform standard air, bone and speech audiometry. The students also display competent performance of video-otoscopy and patient testing instruction. Student perform the normal record keeping chores of this testing. Prerequisite: HIS 104, 106 or permission of instructor. (SFCC)

HIS 125 — Auditory Disorders (4 cr)
Students in this class describe and define the otologic conditions affecting hearing. Students also identify otologic red flags that require referral to medical physicians and other healthcare specialists. Prerequisite: HIS 104, 106 or permission of instructor. (SFCC)

HIS 127 — Hearing Healthcare Management I (4 cr)
Students in this course describe, outline and practice the wide-range skills and competencies necessary in the management of a typical hearing healthcare office's business operations. Prerequisite: HIS 104, 106 or permission of instructor. (SFCC)

HIS 134 — Advanced Audiometrics (5 cr)
Students practice and demonstrate competency in the more advanced diagnostic tests used in the industry. Students in this class will perform tympanometry, otoacoustic emission testing, and complete audiometric evaluations. Students show competence in both handwritten and computer-based recording of test results. Prerequisite: HIS 104, 106, 123 and permission of instructor. (SFCC)

HIS 136 — Hearing Instrument Technologies (4 cr)
This course prepares the student to work with the current technologies used in the hearing instrument industry. Students identify patients and audiological conditions that would benefit from specific circuits, matrices and instrument options. In this course students discuss advanced issues surrounding analog and digital amplification technologies. Prerequisite: Permission of instructor. (SFCC)

HIS 138 — Ear Couplers and Assistive Technologies (5 cr)
This course defines, describes and identifies the functional uses of different types of earmolds, shells and assistive listening devices (ALDs). Students practice taking impressions and modifying earmolds and shells for which they've made impressions. Students demonstrate the correct use of several commonly used ALDs. Ordering and record keeping activities are also practiced. Prerequisite: HIS 104, 106 and permission of instructor. (SFCC)

HIS 201 — Hearing Healthcare Management II (4 cr)
Students describe, outline and practice the wide range skills and competencies necessary in the management of a typical hearing healthcare office's products and services. Prerequisite: Permission of instructor. (SFCC)

HIS 205 — Introduction to Speech-Language Pathology and Audiology (5 cr)
Students explain and write an overview of deficits of speech, language and hearing, and the role of the speech-language pathologist and audiologist. Students also develop a referral protocol to these specialists for their patients. Prerequisite: HIS 104, 106 and permission of instructor. (SFCC)

HIS 206 — Hearing Instrument Specialist Laboratory I (4 cr)
In this course students practice connected activities involved in fitting and dispensing hearing instruments, including: Taking impressions, ordering earmolds/hearing instruments, performing quality control checks of incoming inventory, preprogramming analog and digital hearing instruments, performing real ear acoustic measurement and completing a variety of test box verifications. Ordering and record keeping activities are also practiced. Students develop good communication and problem-solving skills. Prerequisite: HIS 104, 106 and permission of instructor. (SFCC)

HIS 210 — Clinical Methods I (5 cr)
In this course students practice all skills associated with the provision of hearing healthcare services from the first patient contact to the final hearing instrument checkup. Prerequisite: HIS 104, 106 or permission of instructor. (SFCC)

HIS 213 — Marketing/Sales (4 cr)
Students identify, describe and define those elements that an effective marketing campaign should include. Students develop a marketing plan for a typical hearing instrument office. Students also define, practice and demonstrate skills necessary to increase patient compliance with purchase recommendations. Prerequisite: HIS 104, 106 or permission of instructor. (SFCC)

HIS 215 — Hearing Instrument Specialist Laboratory II (5 cr)
In this course students practice connected activities involved in fitting and dispensing hearing instruments including taking impressions, ordering earmolds/ hearing instruments, performing quality control checks of incoming inventory, pre-programming analog/digital hearing instruments, troubleshooting malfunctioning instruments, and adjusting instruments for better fit and performance. Ordering and record keeping activities also are practiced. Students develop good communication and problem-solving skills. Prerequisite: HIS 104, 106 or permission of instructor. (SFCC)

HIS 222 — Clinical Methods II (6 cr)
In this course students practice all skills associated with the provision of hearing healthcare services from the first patient contact to the final hearing instrument checkup. Prerequisite: HIS 104, 106 or permission of instructor. (SFCC)

HIS 250 — Perspectives on Disabilities (4 cr)
Students learn to approach their patient recommendations and treatments showing careful consideration of those historical, international, socioeconomic, ethical, personal and age-related perspectives that may influence treatment outcomes. Students modify their perspectives on disability, individual choices, societal values and social responsibilities to provide the best care to all patients. Prerequisite: HIS 104, 106 or permission of instructor. (SFCC)

HIS 266 — Cooperative Education Seminar (1-2 cr)
For course description, see Cooperative Education. (SFCC)

HIS 267 — Cooperative Education Work Experience (1-18 cr)
For course description, see Cooperative Education. (SFCC)

HEATING, VENTILATION, AIR CONDITIONING AND REFRIGERATION

AIRC 113 — Math for HVAC Technicians (5 cr)
This course is a review of basic math fundamentals starting with whole numbers and proceeding to formula manipulation. Math material is presented in a practical format. (SCC)

AIRC 114 — Principles of Electricity (8 cr)
Students learn the theory of electricity including Ohm's Law, the identification of circuit types and the proper use of test equipment. The development of safe working habits while wiring a gas furnace and performing basic trouble shooting are emphasized. (SCC)

AIRC 115 — HVAC Electrical Applications (7 cr)
Students acquire skills for using test meters, ladder diagrams and basic thermostat controls for heating and cooling systems. Students also demonstrate new skills by developing wiring diagrams for an electric furnace with a condensing unit and installing all the necessary controls and wiring for an operational unit. Basic electrical troubleshooting is performed on the system. (SCC)

AIRC 117 — Theory of Heat Transfer (4 cr)
Students explore basic concepts and applications of force, energy, fluids and heat as applied to refrigeration and air conditioning. Topics include energy, heating and air conditioning equipment, thermal heat properties, basic refrigeration cycles, test equipment, and tools of the trade. (SCC)

AIRC 125 — Sheet Metal Layout and Fabrication (5 cr)
This course introduces the theory and practical application in sheet metal practices. The use of shop equipment and fabrication methods provides student with the essential skills and techniques in layout and fabrication of frequently used air duct fittings. (SCC)

AIRC 128 — Fundamentals of Heating and Mechanical Systems (8 cr)
This course introduces the fundamentals of heating with forced-air fuel gas burning appliances. Other fuel gas appliances are introduced, and the combustion process, as it relates to heating equipment, is explored. Gas codes are introduced with proper venting and piping techniques. Sequence of operation and troubleshooting are emphasized. (SCC)

AIRC 137 — Heating Systems Servicing and Troubleshooting (7 cr)
This course offers training and experience with heating equipment. Students are introduced to the basic controls and control systems found on most HVAC heating systems. Electrical and mechanical functions of the individual components and their relationship to a complete system are emphasized. Lab exercises include hands-on training with electrical systems, capacity testing, mechanical and electrical troubleshooting, and service of residential and light commercial units. (SCC)

AIRC 201 — Refrigeration Fundamentals (8 cr)
This course introduces the theories of refrigeration and provides students with the fundamentals of physical and chemical laws governing the principles of the refrigeration cycle. Basic refrigeration cycles and components are covered. Applications include brazing techniques and electrical controls. (SCC)

AIRC 202 — Thermodynamics of Refrigeration (8 cr)
This course is a continuation of AIRC 201 and provides students with the fundamentals of air conditioning systems and the application of the Mollier Diagram and thermodynamics. Emphasis on practical applications includes basic refrigeration troubleshooting and the use of testing equipment and tools. Lab exercises focus on developing ladder diagrams and troubleshooting electrical components. Prerequisite: AIRC 201. (SCC)

AIRC 246 — HVAC Load Calculations (4 cr)
This course includes the study of heat gain and loss in forced-air systems (heating and cooling). Complete heat loss and heat gain calculations are performed manually, and an air distribution system is designed. Students study energy estimating methods and design systems for a building. Students examine current federal, state and local codes and standards (set forth by ASHRAE) as they apply to HVAC systems. Implementation and air systems instrumentation are explored in lab sessions. (SCC)

AIRC 247 — Oil Heating Systems (4 cr)
This course is an introduction to residential oil heating. Topics include mechanical and electrical operations, and codes of oil heating systems. Laboratory work covers testing, adjusting and troubleshooting electrical and mechanical problems on oil-fired systems. Prerequisite: Permission of instructor. (SCC)

AIRC 249 — Hydronic Heating Systems (7 cr)
Students study basic hydronic heat systems. Topics include mechanical and electrical operations, control systems and codes of hydronic heating systems. Laboratory work covers testing, adjusting and troubleshooting electrical and mechanical problems on hydronic systems. (SCC)

AIRC 255 — Installation Practices (7 cr)
This course introduces students to procedures used in the installation of a complete residential central heating, ventilation and air conditioning system. Previously learned theories and associated application opportunities are utilized on a live project. Proper installation of components and use of hand tools is emphasized. Prerequisite: Permission of instructor. (SCC)

AIRC 262 — Control Theory and Automation (7 cr)
This course introduces the fundamentals of control theory and application. Students set up and run an economizer system, use a phychrometric chart, learn common terms of basic direct digital controls (DDC), interface basic controls with computers, and program thermostats with both computer and command displays. (SCC)

AIRC 263 — System Servicing and Troubleshooting of Air Conditioners (7 cr)
Students are exposed to troubleshooting fundamentals, concentrating on the operation and analysis of AC systems and control circuits. Testing operations of capillary tubes and TVX systems are emphasized. Problem-solving methods and mechanical systems troubleshooting also are covered. Testing, adjusting and troubleshooting of electrical and mechanical problems are covered in lab exercises. Prerequisite: Concurrent enrollment in AIRC 202. (SCC)

AIRC 264 — System Servicing and Troubleshooting of Heat Pumps (7 cr)
This course offers training and experience with mechanical air conditioning equipment used in comfort cooling and heat pump applications. Lab exercises include hands-on training with electrical systems, capacity testing, and mechanical and electrical troubleshooting of residential and light commercial heat pumps. Students learn to install and start up a system in a residence. Refrigeration transition and recovery certification are included. Prerequisite: AIRC 201, 202. (SCC)

AIRC 265 — Direct Digital Control Systems (8 cr)
This course provides advanced programming and networking applications. Students set up and program various components of a direct digital control (DDC) system. All components are tied to the building manager and the system is monitored for proper operation. Students learn to use the computer to troubleshoot the system. External equipment is connected to the system for programming and monitoring. (SCC)

AIRC 266 — Cooperative Education Seminar (1-2 cr)
For course description, see Cooperative Education. (SCC)

AIRC 267 — Cooperative Education Work Experience (1-18 cr)
For course description, see Cooperative Education. (SCC)

HISTORY

HIST 106 — World History to 1500 (5 cr)
World History to 1500 is a comparative inquiry into societies and cultures on the six inhabited continents. It emphasizes economic, social and political globalization and serves as a broad foundation for further studies in history. Prerequisite: SFCC recommended minimum reading placement score: COMPASS 80, ASSET 40. (SCC, SFCC)

HIST 107 — World History since 1500 (5 cr)
World History since 1500 is a comparative inquiry into societies and cultures on six inhabited continents. It emphasizes economic, social and political globalization and serves as a broad foundation for further studies in history. SFCC recommended minimum reading placement score: COMPASS 80, ASSET 40. (SCC, SFCC)

HIST& 116 — Western Civilization I (5 cr)
The major political, social and economic developments of pre-Hellenic, Greek, Roman and medieval history in terms of their contribution to Western civilization. Prerequisite: SFCC recommended minimum reading placement score: COMPASS 80, ASSET 40. (SCC, SFCC)

HIST& 117 — Western Civilization II (5 cr)
European man from the feudal period through the French Revolution and the Napoleonic period. Prerequisite: SFCC recommended minimum reading placement score: COMPASS 80, ASSET 40. (SCC, SFCC)

HIST& 118 — Western Civilization III (5 cr)
The development of Western civilization from the French Revolution to the present. Prerequisite: SFCC recommended minimum reading placement score: COMPASS 80, ASSET 40. (SCC, SFCC)

HIST& 136 — US History 1 (5 cr)
The historical development of the American people from the beginning of European contact to the end of the Civil War with emphasis on the indigenous peoples, the Colonial period, independence, the Constitution, the early Republic and the sectional crisis. (SCC, SFCC)

HIST& 137 — US History 2 (5 cr)
The development of the United States from the end of the Civil War to the present; emphasis on both the understanding and evaluation of basic historical materials. SFCC recommended minimum reading placement score: COMPASS 80, ASSET 40. (SCC, SFCC)

HIST 141 — History of China (5 cr)
An examination of 4,000 years of political, social, economic, and cultural developments in China. This course is designed to prepare students for further study in Chinese and East Asian History. SFCC recommended minimum reading placement score: COMPASS 80, ASSET 40. (SFCC)

HIST 142 — History of Japan (5 cr)
An examination of 2,000 years of political, social, economic, and cultural developments in Japan. This course is designed to prepare students for further study in Japanese and East Asian History. SFCC recommended minimum reading placement score: COMPASS 80, ASSET 40. (SFCC)

HIST& 214 — Pacific NW History (5 cr)
The exploration, settlement and growth of the political, economic and social institutions of Washington and the Pacific Northwest; includes the study of local and state government and environmental problems in the state of Washington. Prerequisite: SFCC recommended minimum reading placement score: COMPASS 80, ASSET 40. (SCC, SFCC)

HIST& 219 — Native American History (5 cr)
This introductory course includes an analysis of early North American Indian history pre-colonization, colonization, and post colonization with a chronology and emphasis on the events and developments of the indigenous peoples who inhabited this country from the period of European contact through the end of the 20th century. (SCC, SFCC)

HIST 222 — Canadian History (5 cr)
A survey of Canadian history from the founding of French America in the 16th century, through the 19th century Confederation era, culminating with the significant developments and events of the 20th century. (SCC)

HIST 230 — Latin American History (5 cr)
A survey of Latin American history from the Colonial era through the Independence period, culminating with the economic, social, and political developments and significant events of the 20th century. Prerequisite: SFCC recommended minimum reading placement score: COMPASS 80, ASSET 40. (SCC, SFCC)

HIST 240 — History of Modern Middle East (5 cr)
This course prepares students for advanced-level courses in Middle Eastern studies. The time period primarily covered the modern developments from the ottoman period to the present, with an emphasis placed on understanding the peoples of the Middle East, their traditions and histories. Prerequisite: SFCC recommended minimum reading placement score: COMPASS 80, ASSET 40, ENGL& 102 advised. (SCC, SFCC)

HIST 266 — Cooperative Education Seminar (1-2 cr)
For course description, see Cooperative Education. (SCC, SFCC)

HIST 267 — Cooperative Education Work Experience (1-18 cr)
For course description, see Cooperative Education. (SCC, SFCC)

HOTEL AND RESTAURANT MANAGEMENT

HM 110 — Introduction to Hospitality (5 cr)
This course introduces students to the basic principles of public hospitality. The history of the industry, organizational methods, employment opportunities and problems facing the hospitality industry are presented. (SCC)

HM 111 — Seminar - Hotel/Restaurant/Tourism (2 cr)
Students study recent trends and business factors that affect the hospitality/tourism industry. Various components of hotel/restaurant/tourism are emphasized. (SCC)

HM 112 — Hospitality Mathematics (3 cr)
This course introduces the concepts of mathematics relating to the hospitality field. Liquid and dry measurements, percentages, and the metric system are introduced. Recipe costing, portion control, contraction and expansion of recipes and formulas, and yield analysis of food products are calculated. (SCC)

HM 115 — Food Sanitation (3 cr)
This course introduces students to the basic principles of sanitation and their significance in food service. Implementing sanitary procedures and programs in the kitchen is emphasized. A national certification exam is given at the conclusion of the course. (SCC)

HM 116 — Nutrition for Chefs and Restaurant Managers (3 cr)
This course introduces students to the characteristics, functions, and food sources of major nutrients and how to maximize nutrient retention in food preparation and storage. Digestion, energy needs, recommended daily allowances and dietary guidelines are emphasized. Prerequisite: HM 115 or concurrent enrollment. (SCC)

HM 124 — Cooking Applications I (4 cr)
This course emphasizes working with raw materials, preliminary cooking and flavoring, and preparing for a variety of cooking methods. (SCC)

HM 126 — Food Science (5 cr)
This course emphasizes basic cooking methods including the preparation of soups; stocks and sauces, meat, fish and poultry; vegetables, fruits and starches; as well as an introduction to breakfast and baking preparation. Prerequisite: Permission of instructor or counselor. (SCC)

HM 130 — Human Relations (5 cr)
Students are introduced to the basic principles of human behavior and their application in developing positive working relationships. (SCC)

HM 141 — Maintenance and Engineering (5 cr)
Students are introduced to the basic technical knowledge required to establish preventive maintenance procedures for hotel/restaurant facilities. (SCC)

HM 151 — Restaurant Management (3 cr)
Students are introduced to the food and beverage operation of hotels and motels. (SCC)

HM 156 — Beverage Management (3 cr)
This comprehensive course addresses all aspects of operating a beverage service for profit. Planning equipment and staff, purchasing, budgeting, inventory management, and marketing are emphasized. Product identification, alcohol awareness, basic bartending procedures, and state and local regulations governing the industry are presented. Receiving a Washington State Class 12 and Class 13 license is included in the course material. (SCC)

HM 160 — Supervisory Housekeeping (3 cr)
Students are introduced to the fundamentals of housekeeping management, recordkeeping and executive responsibilities. Employee training methods are emphasized. (SCC)

HM 202 — Front Office Procedures (5 cr)
Students are introduced to the essential routines addressing all aspects of front office procedures. Registration and reservation processes, rules and regulations and their application to the hotel-motel industry, and ethics and general strategies used when dealing with the public are emphasized. Prerequisite: CIS 110. (SCC)

HM 205 — Hotel/Restaurant Law (5 cr)
Students are introduced to the basic principles of law as it pertains to the operation of hotels and motels. Legal liability, conventional and sales contracts, statutory law, and innkeeper and guest responsibilities are emphasized. (SCC)

HM 208 — Hotel Sales and Marketing (5 cr)
Students are introduced to the fundamentals of hotel/restaurant sales promotion, publicity, advertising, finances and other marketing skills. Advertising and marketing strategies are emphasized. Prerequisite: CIS 110, HM 130. (SCC)

HM 220 — Tourism and the Hospitality Industry (5 cr)
Students are introduced to package tourism arrangements, economics of tourism, and marketing strategies and their relationship to the industry. Prerequisite: CIS 110, HM 130. (SCC)

HM 232 — Hotel/Restaurant Management Principles (5 cr)
Students are introduced to the principles of hotel/restaurant management and their relationship to the overall management of facilities and personnel in the industry. Development of supervisory skills and coaching techniques to improve employee performance is emphasized. Prerequisite: CIS 110 and HM 130. (SCC)

HM 255 — Menu Planning (3 cr)
Students are introduced to the composition of menus, and includes purchasing procedures, merchandising, servicing and pricing of foods. Planning a functional, operative menu using appropriate menu copy and layout is emphasized. Prerequisite: Permission of the instructor or counselor. (SCC)

HM 265 — Hospitality Cost Controls (5 cr)
This course introduces the principles and procedures involved in an effective system of food, labor and sales income control. The development and use of standards and the calculation of actual costs are emphasized. (SCC)

HM 266 — Cooperative Education Seminar (1-2 cr)
For course description, see Cooperative Education. (SCC)

HM 267 — Cooperative Education Work Experience (1-18 cr)
For course description, see Cooperative Education. (SCC)

HM 288 — Cooperative Education Work Experience (No Seminar) (1-18 cr)
For course description, see Cooperative Education. (SCC)

HUMAN SERVICES

HS 102 — Introduction to Human Services (5 cr)
This course is an introduction to human services. Included are current services, merits and shortcomings of current services, and new programs that are needed to meet service gaps and shortcomings. (SFCC)

HS 105 — Child Abuse (5 cr)
The focus of the course explores the phenomena of child abuse from the perspective of the family. From this perspective, the class examines risk factors that predispose families toward child abuse and neglect. The class delves into the legal and psychological issues of physical abuse, physical neglect, psychological maltreatment and sexual abuse. The class will highlight approaches to prevention. (SFCC)

HS 115 — Social Policy (5 cr)
An introductory course that is policy-oriented. It attempts to instill systematic habits of analysis and inquiry that will increase the student's awareness and objectivity. The focus is on current issues and problems in social work. (SFCC)

HS 131 — Human Services Seminar I (1-5 cr)
This course acquaints students with various people-helping skills applicable to a variety of social service settings in the community. Designed to fill emerging needs prior to the development of a regular course or to fill one-time training needs. This course may be repeated for up to 10 credits. (SCC, SFCC)

HS 132 — Human Services Seminar II (1-5 cr)
This course acquaints students with various people-helping skills applicable to a variety of social service settings in the community. Designed to fill emerging needs prior to the development of a regular course or to fill one-time training needs. This course may be repeated for up to 10 credits. (SCC, SFCC)

HS 136 — Improving Interpersonal Communication (5 cr)
Designed to help people live more effectively through improved communication skills. Study, awareness and practice of these skills will enhance students' effectiveness in beginning, maintaining and ending relationships. Students will gain skills in managing controversy, stress and anger. The course is a balance between theory and practice of the skills and concepts involved in becoming an effective communicator. (SFCC)

HS 221 — Treatment Theories in Human Services (5 cr)
This course covers concepts, theories and practices regarding social work treatment. It focuses on the constructs, underlying principles, theories, practices and desired outcomes of several contemporary treatment modalities. Prerequisite: HSSUB 176/second year standing. (SFCC)

HS 281 — Practicum I (5 cr)
Students in the human services programs are placed in a practicum setting where they have an opportunity to observe and to work with people in a human service setting. Each student is individually placed in accordance with his/her career direction. Placements are made in areas such as gerontology, social work, education, early childhood education, special education and hearing impaired. Individual student conferences are arranged to facilitate the total experience. (SFCC)

HS 282 — Practicum II (5 cr)
Students in the human services programs are placed in a practicum setting where they have an opportunity to observe and to work with people in a human service setting. Each student is individually placed in accordance with his/her career direction. Placements are made in areas such as gerontology, social work, education, early childhood education, special education and hearing impaired. Individual student conferences are arranged to facilitate the total experience. (SFCC)

HS 283 — Practicum III (5 cr)
Students in the human services programs are placed in a practicum setting where they have an opportunity to observe and to work with people in a human service setting. Each student is individually placed in accordance with his/her career direction. Placements are made in areas such as gerontology, social work, education, early childhood education, special education and hearing impaired. Individual student conferences are arranged to facilitate the total experience. (SFCC)

HUMANITIES

HUM& 101 — Intro to Humanities (5 cr)
This is an interdisciplinary program introducing students to the humanities through the arts-music, drama, poetry, movies, dance and the visual arts. In addition to an understanding of the basic elements and principles of the arts, each student perceives the role of the arts in society, the range of creative expression and what is involved in the creative process. Participation involves a variety of learning experiences including attendance at campus and community arts events, group discussion, multimedia instructional units and personal creative expression. Students may purchase tickets for a wide variety of offerings such as Civic Theatre, Spokane Symphony Orchestra, movies, etc., in lieu of a textbook. (SCC, SFCC)

HUM 102 — Introduction to Women's Studies (5 cr)
This course explores issues relating to women including but not limited to women's history, women's work and the socialization of women. Additionally, this course examines some of the differences between women and men, with the hope that through descriptive study, female and male students become empowered in new ways. In part, this goal encourages an in-depth look at the social structures and dominant dialogues that have posed limits upon both women and men while encouraging the search for removing such limits. (SCC, SFCC, IEL)

HUM 107 — Introduction to Cultural Studies (5 cr)
This course introduces students to the practice of analyzing American popular culture in its various forms, from films, advertisements and music to the habits and practices that characterize everyday life in the United States. Students learn to "read" popular culture using a wide range of interdisciplinary perspectives and theories, in particular those that emphasize how class, gender, sexuality, nationality and race are represented in cultural texts. Students discuss how these representations shape cultural beliefs and attitudes. Prerequisite: ENGL& 101 or permission of instructor. SFCC recommended minimum reading placement score: COMPASS 80, ASSET 40. (SCC, SFCC)

HUM 141 — Introduction to Film (5 cr)
This course is a basic introduction to how films communicate meaning and influence society. The course gives the students an understanding of film forms, techniques and styles. Students develop a critical viewpoint and be able to explain the many ways in which film communicates. The overall goal of the course is to produce perceptive and sensitive film viewers. Feature-length films are viewed in class. Prerequisite: SFCC only: Recommended minimum reading placement scores: COMPASS 80, ASSET 40. (SCC, SFCC)

HUM 201 — Humanities, Past, Present, and Future (5 cr)
An interdisciplinary class introducing students to the human quest for the meaning of life. Students will analyze literature, philosophy, music, history, and the visual arts of the past and present and then create future scenarios for themselves and societies. In addition to lecture presentations, students have assigned reading, elective reading and writing assignments weekly. Each student will also has a special humanities project. (SCC)

HUM 207 — Basic Movie Making Techniques (5 cr)
This course is designed to acquaint the student with the three basic phases of movie making and emphasizes the directorial and storytelling functions of the media. Prerequisite: HUM 141 or permission of instructor. (SCC)

HUM 221 — Great Directors (5 cr)
This course is designed for students interested in exploring the films, styles and themes of great film directors--American and international. Students study four American directors, four international directors and one independent director. The directors and films studied vary each quarter. In addition, each student researches and studies films of one director of his/her choice. (SCC, SFCC)

HUM 222 — American Film Classics (5 cr)
American classic films, through the 1990s, are viewed and discussed in order to appreciate the evolution of the technical art of the cinema and to analyze how film content is a social barometer of the period of time in which it was produced. Full-length feature classics such as "Birth of a Nation" and "Citizen Kane" are studied. (SFCC)

HUM 223 — Classic International Cinema (5 cr)
An overview of the history of international cinema as art rather than as a commercial product. Major national film stylistic developments and movements are studied by viewing representative feature length films including classics such as Einstein's Potemkin, De Soca's The Bicycle Thief and Kurosawa's Ran. Prerequisite: SFCC only: Recommended minimum reading placement score: COMPASS 80, ASSET 40. (SFCC)

HUM 224 — Contemporary Global Cinema (5 cr)
This course is a study of people of different national, ethnic and racial backgrounds via a review of current international cinema. Emphasis is placed on exploring economic, social and political issues. Feature length films will be viewed in class, including Zhang Yomou's Story of Qiu Ju, Nihita Mikhalkov's Burnt by the Sun and Gregory Nava's Mi Familia. Prerequisite: SFCC only: Recommended minimum reading placement score: COMPASS 80, ASSET 40. (SFCC)

HUM 225 — Independent Film (5 cr)
This course is for students interested in exploring films made outside of the studio system, usually on low budgets and often exploring themes, values and subject matter which are highly personal and intense in nature including themes which mainstream cinema finds uninteresting, offensive or not likely to produce a profitable product. (SCC, SFCC)

HUM 236 — The Documentary Film (5 cr)
A course designed to explore, analyze and interpret the documentary as an aesthetic form; a device to document human experience; and a vehicle of social change. Students explore the historical perspective of the documentary as well as examine the tradition of film techniques that affect the reality and "truth" depicted through the genre. Prerequisite: SFCC only: Recommended minimum reading placement score: COMPASS 80, ASSET 40. (SFCC)

HUM 241 — The Impact of the Nazi Past (5 cr)
This course is designed for students interested in the history of Germany's Nazi past. Students examine the depiction of national socialism and racism in important German language films by significant European film directors from the 1950s to the present. Class discussion encourages a comparative perspective that draws connections to the issues of nationalism and racism in Germany and the U.S. today. The course is taught in English, and all films have English subtitles. (SFCC)

HUM 266 — Cooperative Education Seminar (1-2 cr)
For course description, see Cooperative Education. (SCC)

HUM 267 — Cooperative Education Work Experience (1-18 cr)
For course description, see Cooperative Education. (SCC)

HUM 295 — Special Topics in Humanities (1-5 cr)
A team-taught interdisciplinary class. Specific content and focus vary from quarter to quarter according to designation and credits filed in advanced of each scheduling. Students participate in a variety of learning experiences such as lectures, seminars, panel discussions, etc., all of which explore selected issues from the following areas: Philosophy, music, art history, film, drama, literature or the history of ideas. (SCC)

HUM 296 — Special Topics in Humanities (1-5 cr)
A team-taught interdisciplinary class. Specific content and focus vary from quarter to quarter according to designation and credits filed in advanced of each scheduling. Students participate in a variety of learning experiences such as lectures, seminars, panel discussions, etc., all of which explore selected issues from the following areas: Philosophy, music, art history, film, drama, literature or the history of ideas. (SCC)

HUM 297 — Special Topics in Humanities (1-5 cr)
A team-taught interdisciplinary class. Specific content and focus vary from quarter to quarter according to designation and credits filed in advanced of each scheduling. Students participate in a variety of learning experiences such as lectures, seminars, panel discussions, etc., all of which explore selected issues from the following areas: Philosophy, music, art history, film, drama, literature or the history of ideas. (SCC)

HYDRAULIC AND PNEUMATIC AUTOMATION TECHNICIAN

FLPT 104 — Hydraulics/Pneumatic Fundamentals (6 cr)
Students learn the basic fundamentals of hydraulics/pneumatic operations. (SCC)

FLPT 111 — Hydraulic Calculations (5 cr)
This course is a review of basic algebra skills and procedures required for setting up and solving fluid power problems. Mathematical formulas required to calculate oil pressure, actuator forces and speed, oil flow and velocities required for fluid line sizing are emphasized. The use of force and speed requirements of a machine to set up the hydraulic system calculations required for determining oil flow, oil pressure and the input horsepower is stressed. Prerequisite: Concurrent enrollment in FLPT 112, 113, 114. (SCC)

FLPT 112 — Hydraulic Basics and Theory (5 cr)
This course introduces basic laws related to oil hydraulics and their practical applications to hydraulic component operation by changing either oil flow or pressure. Students relate the hydraulic component to the corresponding ANSI fluid power symbol and study hydraulic schematics for automated machinery identifying each component and its application and effect on the total system. Industrial plants and machine manufacturers who build machinery using industrial hydraulic components are studied in the classroom. Prerequisite: Concurrent enrollment in FLPT 111, 113, 114. (SCC)

FLPT 113 — Blueprint Reading (4 cr)
Students are introduced to the basic construction of automated machinery including the various types of materials, fasteners, and welding and machining operations used to fabricate machine parts from mechanical drawings. Machining tolerance, finishes, parts dimensioning, welding symbols, and the types of details, sections and views used on typical mechanical drawings are presented. Prerequisite: Concurrent enrollment in FLPT 111, 112, 114. (SCC)

FLPT 114 — Basic Hydraulics Lab (2 cr)
This course offers practical applications in the study of oil flow and pressure and their relationship to component operation. Students learn to read hydraulic schematics for automated machinery. Prerequisite: Concurrent enrollment in FLPT 111, 112, 113. (SCC)

FLPT 121 — Pneumatic Theory (6 cr)
This course introduces basic laws related to compressed air and their application in air compressors, plant air, piping, and sizing pneumatic components. Mathematical formulas and setup procedures for calculations required in pneumatic systems and the production of schematic drawings for pneumatic power and control circuits are included. Prerequisite: Concurrent enrollment in FLPT 122, 123. (SCC)

FLPT 122 — Drawing Fundamentals (3 cr)
This course introduces basic sketching and lettering emphasizing orthographic and isometric drawing styles. The layout and dimensioning of shop mechanical drawings are presented. Prerequisite: Concurrent enrollment in FLPT 121, 123. (SCC)

FLPT 123 — Machine Controls (7 cr)
Students study the interfacing of mechanical, hydraulics, pneumatics with electrical, electronic or pneumatic controls for predetermined sequence of operation for automated machines. Reading and drawing the electrical schematics used to control solenoid valves for hydraulic or pneumatic actuators; terminology and symbols used in programming schematics for an Allen Bradley Mini PLC 2 programmable controller; interpreting symbols required for reading air logic pneumatic schematics used for machine controls; and writing machine sequence of operations to match schematic operations are emphasized. Prerequisite: Concurrent enrollment in FLPT 121, 122. (SCC)

FLPT 131 — Hydraulic Systems (6 cr)
This course is a detailed study of five basic hydraulic systems and their applications to powering production machinery. Basic systems, hydraulic components and their working relationship which is controlled by their location, and piping arrangement in the overall system are emphasized. Prerequisite: FLPT 111, 112, 121 and concurrent enrollment in FLPT 132, 133, 134, 135. (SCC)

FLPT 132 — Fluid Line Fabrication (2 cr)
This course offers practical applications in fluid conductor fabrication emphasizing the safe and accurate operating procedures required in the setup and use of specialized tools. Fabricating procedures include cutting and threading pipe; cutting, bending and flaring tubing; cutting hydraulic hoses; and assembling permanent and reusable hose ends. Prerequisite: FLPT 112, 121 and concurrent enrollment in FLPT 131, 133, 134, 135. (SCC)

FLPT 133 — Fluid Line Connectors (5 cr)
Students study the three basic types of fluid lines and the fittings required to install them in a hydraulic system. Fluid line construction, materials used, manufacturing tolerances, quality control, specifications for purchasing, pressure limitations and oil flow characteristics based on I.D. are covered. Fitting identification, description and manufacturer part numbers are used to acquaint students with high pressure, low pressure and vacuum applications. Prerequisite: FLPT 112, 121 and concurrent enrollment in FLPT 131, 132, 134, 135. (SCC)

FLPT 134 — Shop Drawing (2 cr)
Students are introduced to drawing and lettering skills required to produce drawings of parallel bars, directional valve templates, and pump and motor mounting brackets. Prerequisite: FLPT 112, 121 and concurrent enrollment in FLPT 131, 132, 133, 135. (SCC)

FLPT 135 — Fluid Line Sizing Calculations (2 cr)
This course deals with specific calculations required in the study of fluid lines to size fluid lines in hydraulic systems. Prerequisite: FLPT 112, 121 and concurrent enrollment in FLPT 131, 132, 133, 134. (SCC)

FLPT 136 — Applied Hydraulics/Pneumatics (2-5 cr)
This course introduces to the basics of fluid power and its application to various programs. Hydraulic and pneumatic systems operation and their relationship to electrical, electronic or pneumatic control systems are emphasized. The course is offered for variable credits to meet the needs of various programs. (SCC)

FLPT 230 — Advanced Pneumatics Theory (3 cr)
Students learn energy and air consumption; pneumatic automation components; pneumatic system design and vacuum system and applications. Prerequisite: FLPT 131 and concurrent enrollment in FLPT 231, 232, 233, 234. (SCC)

FLPT 231 — Advanced Pneumatics Lab (2 cr)
Students learn energy and air consumption; pneumatic automation components; pneumatic system design and vacuum system and applications. Prerequisite: FLPT 131 and concurrent enrollment in FLPT 231, 232, 233, 234. (SCC)

FLPT 232 — Mechanical Drive Systems Theory (3 cr)
Students learn the Mechanical Drive System servo and stepper motor drives; lead screw technologies; variable speed drives and drive controls. Prerequisite: FLPT 231 and concurrent enrollment in FLPT 231, 232, 233, 234. (SCC)

FLPT 233 — Mechanical Drive Systems Lab (3 cr)
Students learn the Mechanical Drive System servo and stepper motor drives; lead screw technologies; variable speed drives and drive controls. Prerequisite: FLPT 232 and concurrent enrollment in FLPT 231, 232, 233, 234. (SCC)

FLPT 234 — Velocity and Load Calculations (1 cr)
This course content relates to load velocities and kinetic energy; moment load calculations and force requirements. Prerequisite: FLPT 233 and concurrent enrollment in FLPT 230, 231, 232, 233. (SCC)

FLPT 241 — Fluid Power Shop Theory (5 cr)
Students learn to setup and use basic shop tools required to machine hydraulic manifolds, fabricate power units and overhaul hydraulic components. Shop terminology, tool identification, and the proper use and care of precision layout and measuring tools are included. Prerequisite: FLPT 131 and concurrent enrollment in FLPT 242, 243, 244. (SCC)

FLPT 242 — Machine Tool Operation (7 cr)
Students learn shop layout procedures and skills by using shop drawings completed in the third quarter. They develop practical skills required to sharpen drill bits, lathe tools, milling cutters and removing broken taps, safely operate cut-off and band saws, drill presses, lathes, milling machines, and surface grinders while completing required shop projects. Prerequisite: FLPT 131 and concurrent enrollment in FLPT 241, 243, 244. (SCC)

FLPT 243 — Advanced Machine Controls (4 cr)
This course is a study of the advantages of programmable logic controllers (PLC) over relay logic machine control. Students learn the advantages of machine control available when using data manipulation features in PLC programming. Converting relay logic electrical schematic drawings to PLC schematics, developing a PLC program from a specific machine sequence of operation, programming the PLC and verifying the program on a machine simulator board wired to the PLC are emphasized. Prerequisite: FLPT 131 and concurrent enrollment in FLPT 241, 242, 244. (SCC)

FLPT 244 — Machine Feed and Speed Calculations (1 cr)
This course deals with specific calculations required for the proper operation of drills, lathes and milling machines used in the hydraulics and pneumatic industry. Prerequisite: FLPT 131 and concurrent enrollment in FLPT 241, 242, 243. (SCC)

FLPT 251 — Hydraulic Circuits (4 cr)
Students learn the principles of circuits, components and fluid line sizing. Estimating costs for materials is introduced. Prerequisite: FLPT 131 and concurrent enrollment in FLPT 252, 253, 254. (SCC)

FLPT 252 — Hydraulic Component Repair (6 cr)
Students learn shop procedures for hydraulic and pneumatic component disassembly, inspection, repair and testing using prepared lab sheets and manufacturers' parts sheets. Safe use of hand tools and the importance of cleanliness in the work area are emphasized. Prerequisite: FLPT 131 and concurrent enrollment in FLPT 251, 253, 254. (SCC)

FLPT 253 — Fluid Line Layout and Assembly (2 cr)
This course introduces basic procedures required for the layout and assembly of pipe and pipe fittings to fit a specific component arrangement. The fabrication of fluid lines to fit existing tube fittings that meet or exceed the manufacturers' pressure test specifications is emphasized. Prerequisite: FLPT 131 and concurrent enrollment in FLPT 251, 252, 254. (SCC)

FLPT 254 — Advanced Hydraulics Lab (3 cr)
This course offers practical applications in the creation of hydraulic circuits emphasizing calculations, selection of components and sizing fluid lines. Costing out materials is presented. Prerequisite: FLPT 131 and concurrent enrollment in FLPT 251, 252, 253. (SCC)

FLPT 264 — Fluid Power Computer Applications (4 cr)
Students are introduced to various computer applications used in the fluid power industry. Students learn basic AutoCad commands and procedures used to create schematics using specialized symbol menus. They become proficient in the use of Automation Studio, a fluid power simulation program, to design and troubleshoot circuits. In addition, students learn to develop a hydraulic engineering calculations worksheet using Excel and to use manufacturers' CDs for design and engineering specifications. Prerequisite: Successful completion of first year or permission of instructor. (SCC)

FLPT 265 — Hydraulic Circuit Design (3 cr)
This course offers practical shop experience in the construction of a hydraulic circuit design from an automated machine specification. Prerequisite: FLPT 251 and concurrent enrollment in FLPT 268, 269. (SCC)

FLPT 266 — Cooperative Education Seminar (1-2 cr)
For course description, see Cooperative Education. (SCC)

FLPT 267 — Cooperative Education Work Experience (1-18 cr)
For course description, see Cooperative Education. (SCC)

FLPT 268 — Fluid Power Application and Sales (5 cr)
This course introduces controlled selling techniques required for successful fluid power sales. Computerized inventory control methods are included. Prerequisite: FLPT 251 and concurrent enrollment in FLPT 265, 269. (SCC)

FLPT 269 — Hydraulic Manifold Design (3 cr)
This course offers theory and practical lab experience in the identification of important controlling factors necessary to specify a custom made hydraulic manifold. Students learn to generate a series of manifold drawings using component layout techniques and AutoCad. Prerequisite: FLPT 251 and concurrent enrollment in FLPT 265, 268. (SCC)

FLPT 271 — Pneumatic Theory (2-5 cr)
This course introduces basic pneumatic (compressed air) theory, identification of components in a pneumatic system, and basic circuit design and troubleshooting. (SCC)

FLPT 272 — Pneumatic Math and Symbols (2-4 cr)
This course introduces basic pneumatic theory and the interpretation of pneumatic symbols and diagrams. Related mathematics for calculating flow, pressure and volume is presented. (SCC)

FLPT 273 — Hydraulic Theory (2-5 cr)
This course introduces basic hydraulic theory. Students learn to identify and apply components in a hydraulic system. (SCC)

FLPT 274 — Applied Hydraulics (2-4 cr)
This course offers practical application and interpretation of hydraulic circuits emphasizing the drawing and interpretation of circuits using proper schematic symbols. (SCC)

FLPT 279 — Proportional Valves (4 cr)
Students are introduced to the use of proportional valves to accurately position, accelerate and decelerate actuators. Precise mechanical positioning of the valve spool and the interfacing of an electronic sensor to indicate spool position is emphasized. The effect of infinite spool positioning on oil pressure and the elimination of hydraulic system shock is covered. Prerequisite: FLPT 112 or 136 or 273 and 274 or permission of instructor. (SCC)

FLPT 288 — Cooperative Education Work Experience (No Seminar) (1-18 cr)
For course description, see Cooperative Education. (SCC)

INTEGRATED BUSINESS AND ENTREPRENEURSHIP PROGRAM

IBE 201 — Integrated Business and Entrepreneurship Principles I (10 cr)
The IBE Principles I course offers a hands-on approach to training future business leaders and entrepreneurs. College instructors and local business and community leaders guide student teams through the process of identifying a business product or service, conducting market research, and developing a business plan outline. This program is limited to individuals who have received permission of Program Director and have completed IBE application. (SCC)

IBE 202 — Integrated Business and Entrepreneurship Principles II (10 cr)
The IBE Principles II course offers a hands-on approach to training future business leaders and entrepreneurs. College instructors and local business and community leaders guide student teams through development and management of business operations, including accounting systems, understanding legal and regulatory issues, and identifying and securing material resources. Prerequisite: IBE 201 or instructor permission. (SCC)

IBE 203 — Integrated Business and Entrepreneurship Principles III (10 cr)
The IBE Principles III course offers a hands-on approach to training future business leaders and entrepreneurs. College instructors and local business and community leaders guide student teams through the creation and execution of a marketing plan and management of human resources. This course concludes with a capstone team presentation of the business plans developed throughout the IBE program. Prerequisite: IBE 202 or instructor permission. (SCC)

INTERIOR DESIGN

INTDS 105 — Design Drawing (4 cr)
Design drawing is a beginning drawing class that offers design students a strong introduction to drawing skills needed in their profession. The class emphasizes the development of close observation skills and composition as students experience the fundamentals of drawing line, shape, light and reflection, shade and shadow, and perspective as related to interior subjects and formats. Prerequisite: Required minimum reading placement score: COMPASS 80, ASSET 40. Required minimum writing placement score: COMPASS 76, ASSET 40. (SFCC)

INTDS 106 — Sketching Techniques (4 cr)
Students learn to effectively communicate ideas through quick sketching visual formats. Instruction includes a wide variety of approaches to sketching techniques, working from simple to complex subject matter including still life's, interiors and the human form. (SFCC)

INTDS 107 — Rendering Techniques (4 cr)
Rendering Techniques exposes students to different media and teaches them to accurately represent various subject matter in complex illustrations. The class places heavy emphasis on developing close observation skills, translating observations into a loose rendering style and a bold, creative approach to mixed media rendering styles. Prerequisite: GRDSN 105, INTDS 106 or permission of instructor. (SFCC)

INTDS 170 — Elements of Interior Design (5 cr)
Examination of basic design principles and elements used in interior space design. Study of the use of contemporary spaces, furnishings and accessories based on integration of color, light, line, balance, texture and form. Prerequisite: Required minimum reading placement score: COMPASS 80, ASSET 40. Required minimum writing placement score: COMPASS 76, ASSET 40. (SFCC)

INTDS 171 — Interior Design Studio I (6 cr)
Students in this course study how to apply design principles to space planning in addition to functional and aesthetic analysis of interior components. Students learn to complete a series of practical residential design problems, including social and private spaces. Activities include how to measure and draw actual spaces, and selection and incorporation of architectural materials and furniture as integral design components. Students begin to build a selection of interior projects for their portfolio using professional presentation techniques. Prerequisite: INTDS 184, 187 or permission of instructor. (SFCC)

INTDS 172 — Interior Design Studio II (6 cr)
This course builds on knowledge gained in INTDS 171 by offering more advanced and specific, practical applications of residential environment design. It emphasizes selection of residential interior finishes, design concept development, space planning, problem solving, and functional and aesthetic factors as design components. Freehand drawing and sketching are integral to most projects. Students refine skills in working and design drawings, research methods, and the design process. Projects might include kitchen design, product research, and specification and alternative housing. Prerequisite: INTDS 171 or permission of instructor. (SFCC)

INTDS 173 — Architectural Graphics 1 (4 cr)
Fundamentals of mechanical drawing pertaining to interior design; architectural floor plans, symbols, elevations and lettering. Prerequisite: Required minimum reading placement score: COMPASS 80, ASSET 40. Required minimum writing placement score: COMPASS 76, ASSET 40. (SFCC)

INTDS 174 — Design Presentation (4 cr)
Design Presentation introduces students to various media techniques and styles in visual presentation of both 2-D and 3-D projects. Students learn to effectively communicate design ideas in the form of written design concepts using design language and appropriate vocabulary. Through a combination of public speaking techniques and creative presentation styles, students learn to effectively present their ideas in front of an audience. Prerequisite: INTDS 107, 184, 187. (SFCC)

INTDS 175 — Materials of Interior Design (5 cr)
Definition and application of materials appropriate for use in interiors to include glass, wood, plastics, floor and wall coverings, metals, and building materials. Prerequisite: INTDS 170. (SFCC)

INTDS 176 — Special Environments (6 cr)
This course is designed to help students develop knowledge of universal design, barrier-free space requirements and specifications, skill in designing for persons with varying abilities, and an awareness of human needs throughout the life cycle. Learning experiences will include guest speakers, field trips, simulation techniques and teamwork. Students continue to develop and refine skills in sketching, design drawings, research methods, problem solving and design concepts. Students have opportunities to experience and master course information when they are challenged to apply the information to specific projects. Prerequisite: INTDS 172 or permission of instructor. (SFCC)

INTDS 179 — History of Interiors I (3 cr)
A survey of types of furniture and interior architectural forms common to various historical periods including antiquity, medieval, Renaissance and eastern styles. Includes researching a project, creating traditional period backgrounds and atmospheres. (SFCC)

INTDS 180 — History of Interiors II (3 cr)
A survey of types of furniture and interior architectural forms common to various historical periods, including Baroque, Rococo, Neoclassic and Victorian. Includes researching a project, creating a traditional period background and atmosphere. Prerequisite: INTDS 179 or permission of instructor. (SFCC)

INTDS 181 — History of Interiors III (3 cr)
A survey of types of furniture and interior architectural forms common to the Industrial Revolution in England and America, European and American Art Nouveau, Art Deco, the Mission Style, the Bauhaus and International Styles, and the modern movement to the present. Prerequisite: INTDS 180 or permission of instructor. (SFCC)

INTDS 184 — Architectural Graphics II (4 cr)
Architectural drafting development includes light frame construction principles and working drawings for a private residence. Additional study includes introduction to computer-aided drafting. Prerequisite: INTDS 173. (SFCC)

INTDS 185 — Building Systems for Interior Design (3 cr)
Introduction of specific systems within a building that directly affect the interior environment, systems introduction to include: Structural, mechanical, electrical, building envelope. Additional emphasis to include building codes and basic design considerations for building systems. Content is specifically focused on interior design and how designers would interface with other design consultants. Prerequisite: INTDS 171 and concurrent enrollment in INTDS 172, 186. (SFCC)

INTDS 186 — Lighting Design (3 cr)
This course covers the study of lighting design and application in both residential and commercial interiors. Includes practical problem solving and reflected ceiling plans. Prerequisite: INTDS 171. (SFCC)

INTDS 187 — Architectural Graphics III (4 cr)
This course focuses on 3 dimensional volume exploration through the use of different methods of graphically depicting the space. Instruction is provided in the fundamentals of perspective drawing, paraline drawing, and isometric drawing. Additionally, students will learn techniques in model building as a design and presentation tool. Prerequisite: INTDS 184. (SFCC)

INTDS 189 — Special Topics (3 cr)
This course focuses on a topic currently relevant to the field of interior design as a supplement to existing program courses. Course content varies depending on topic and number of credits offered. Areas students explore may include historic preservation, community service and educational/cultural tours. Course may be repeated for credit with different topics. Prerequisite: INTDS 170. (SFCC)

INTDS 266 — Cooperative Education Seminar (1-2 cr)
For course description, see Cooperative Education. (SFCC)

INTDS 267 — Cooperative Education Work Experience (1-18 cr)
For course description, see Cooperative Education. (SFCC)

INTDS 268 — Design Portfolio (3 cr)
This course examines how design communication relates to client presentation. It focuses on portfolio and interviewing skills for professional presentation. Students develop creative portfolios that capture their capabilities as well as their personal and design philosophy, in a medium of their choice. Prerequisite: INTDS 282; INTDS 286 or instructor permission and concurrent enrollment in INTDS 266; INTDS 267 or instructor permission. (SFCC)

INTDS 275 — Professional Practices (3 cr)
Students learn personal goal setting, how to establish a business plan, types of business formations, resources of advice and counsel, and how to establish an interior design practice. (SFCC)

INTDS 280 — Textiles for Interiors (5 cr)
The selection, use and care of textile fabrics for interiors based on the study of fibers, fabric construction, specific finishes and properties; emphasis on designer selection and specification of fabrics for window treatments, upholstering furniture, floor coverings and accessories. Prerequisite: ART 105 and INTDS 170 or permission of instructor. (SFCC)

INTDS 281 — Commercial Design Studio I (6 cr)
Students learn the practical problem-solving techniques used in the design of commercial and public spaces. Commercial design materials and specifications are surveyed and applied to a series of interior projects requiring research, teamwork and professional presentation. Projects may include reception areas, hospitality, small office, healthcare and retail establishments. Actual projects are used as they become available. Prerequisite: INTDS 176, GPA 2.0 and faculty evaluation. (SFCC)

INTDS 282 — Commercial Design Studio II (6 cr)
Students are involved with advanced work in contract and institutional design problems including research projects. Lectures are used to discuss project programming and to synthesize information gained in INTDS 281. Projects may include various international commercial spaces, hospitality and healthcare environments. Actual design projects are used when practical. Prerequisite: INTDS 281 or permission of instructor. (SFCC)

INTDS 285 — Computer Aided Design I (4 cr)
Introduction to the basic CAD skills needed to complete 2 dimensional drawings using computer aided design software. Students will learn to navigate the graphic interface and complete floor plans, furniture plans, reflected ceiling plans, and interior elevations using industry specific software and principles. Prerequisite: INTDS 172 and concurrent enrollment in INTDS 176. (SFCC)

INTDS 286 — Computer Aided Design II (4 cr)
This course builds on the skills learned in INTDS 285 and introduces more advanced design and drafting operations including 3-D design drawing using AUTOCAD. Prerequisite: INTDS 285. (SFCC)

INTDS 287 — Digital Interior Design Technology (4 cr)
This course provides a working knowledge of some of the digital design computer technology used today in the interior design industry. Through practice exercises and applications, students learn the basics of digital design programs including 3D, AutoCAD and Photoshop. Course work culminates in a final project that integrates photographs, AutoCAD drawings and other images and elements using features from each of the learned digital programs. Prerequisite: Minimum of one quarter of AutoCAD within the previous one to two years. Familiarity with the Windows environment and understanding of mouse functionality (basic AutoCAD drawing and edit commands). Basic understanding of how to specify furniture. Ability to efficiently read a floor plan. Basic understanding and familiarity with Photoshop. (SFCC)

INTDS 289 — Computer Aided Design III (4 cr)
This course builds on basic CAD skills from INTDS 285 and INTDS 286 and introduces software focusing on building information modeling (BIM) and three dimensional design. Students will learn how to use various software applications through the design process to achieve an efficient project workflow. Prerequisite: INTDS 286 and concurrent enrollment in INTDS 287. (SFCC)

INTDS 295 — International Design (5 cr)
Students gain first-hand experience with and exposure to the art, history, interior design and culture of a foreign country. Students participate in guided visits to museums, monuments and specially organized discipline-specific sites. This class involves a 10-15 day tour of the designated foreign country and offers a multi-faceted exposure to its culture. (SFCC)

INTERPRETER TRAINING PROGRAM

ITP 104 — Introduction to Audiologic Rehabilitation/Habilitation (4 cr)
This course introduces the anatomy of the ear, the functions of the parts of the ear, types and function of hearing assistive devices. It is designed to furnish students with a basic understanding of the physiology, mechanics and the impact of hearing loss as well the habilitation/rehabilitation process. Prerequisite: Concurrent enrollment in ASL& 121. (SFCC)

ITP 231 — Theories of Discourse Analysis (2 cr)
This course will provide an introduction to discourse analysis as practiced by working interpreters. The primary focus will be to distinguish between different discourse analysis models and apply their ideas to the study and use of American Sign Language. Students will also be introduced to finding meaning, using appropriate ASL syntax, and how to use visualization and mind mapping for determining source message and constructing a target message. Prerequisite: ASL& 123 and concurrent enrollment in ASL& 221, ITP 241. (SFCC)

ITP 232 — ASL Linguistic Principles (3 cr)
This course will apply linguistic theories to American Sign Language. You will learn of the different linguistic theories and how they apply to the field of ASL. Prerequisite: ASL& 221, ITP 231, 241 and concurrent enrollment in ASL& 222. (SFCC)

ITP 233 — Manually Coded English Systems (5 cr)
This course is designed to introduce various systems of Manually Coded English (MCE) created for working with D/deaf and hard of hearing children, including the Rochester Method, Seeing Exact English (SEE-I), Signing Exact English (SEE-II), Cued Speech, Linguistics of Visual English (LOVE), and Conceptually Accurate Signed English (CASE). The primary focus will be to build vocabulary, receptive and expressive skills, and employ English grammatical structure using Signing Exact English (SEE-II). This course introduces approximately 400 vocabulary words as well as the affixes, contractions and prefixes used in SEE-II. Prerequisite: ASL& 222, ITP 232, 242 and concurrent enrollment in ASL& 223, ITP 243. (SFCC)

ITP 241 — Deaf Social and Cultural Issues (5 cr)
This course is designed to provide an in-depth look at various aspects of Deaf Culture which were overviewed in ASL& 121, 122 and 123. Language, history, legal issues, cultural conflicts, and reflective views of cultural aspects of the Deaf community will be presented. Previously learned aspects of Deaf Culture will be expanded. Prerequisite: ASL & 123 and concurrent enrollment in ASL& 221, ITP 231. (SFCC)

ITP 243 — Educational Interpreting (2 cr)
This 2 credit course discusses the role and considerations for an interpreter in educational settings. In this course, the student will experience application of the Code of Professional Conduct and the ethical considerations discussed in previous courses. Students will consider specific situations, such as Deaf/hard-of-hearing children with minimal language skills, with sight challenges, with Cochlear Implants and/or with other disabilities. Prerequisite: ASL& 222, ITP 232 and concurrent enrollment in ASL& 223, ITP 233. (SFCC)

ITP 246 — Ethics of Interpreting (3 cr)
This course is designed to focus on human rights, morals, and ethical decision making, especially those procedures and practices used during educational interpreting. In this course, students will study human rights in general, ethical decision making models, and the history of interpreting. Students will also review previously introduced material on the RID code of Professional Conduct as applied to educational interpreting and accepted practices. Prerequisite: ASL& 223 and concurrent enrollment in ITP 243, 251, 261, 281. (SFCC)

ITP 251 — Interpreting I (5 cr)
This course is designed to prepare the student with skills to receive information auditorally or visually and express that information in an equivalent message effectively, including affect, mood and inflection, using simultaneous interpreting methodologies. Prerequisite: ASL& 223, ITP 233, 243 and concurrent enrollment in ITP 261, 281. (SFCC)

ITP 252 — Interpreting II (5 cr)
This course is designed to continue your preparation for exiting into an educational setting to work as an interpreter. You will continue to develop sign vocabulary appropriate for specific educational experiences, enhance receptive and expressive skills and work on speed and accuracy. You will learn to incorporate mime, physical movement, and ASL non-manual markers to assist in conveying meaning. Prerequisite: ITP 251, 261, 281 and concurrent enrollment in ITP 262, 282. (SFCC)

ITP 253 — Interpreting III (5 cr)
In this course, you will apply simultaneous interpreting skills so as to receive visual discourse and verbally gloss information effectively, including affect, mood, and inflection; receive auditory information and express the information in equivalent appropriate ASL information, including affect, mood and inflection. You will enhance your skills in use of non-manual markers to convey auditory meaning. Prerequisite: ITP 252, 262, 282 and concurrent enrollment in ITP 263, 283. (SFCC)

ITP 261 — Transliteration I (5 cr)
This course is designed to introduce transliterating and distinguishing between interpreting and transliterating. Students will work on sign-to-voice and voice-to-sign skills, increase vocabulary both expressively and receptively, and increase and improve grammar skills in consecutive transliterating. Prerequisite: ASL& 223, ITP 233, 243 and concurrent enrollment in ITP 251, 261. (SFCC)

ITP 262 — Transliteration II (5 cr)
In this course, students will increase vocabulary, enhance receptive and expressive skills and improve speed and accuracy in voice-to-sign and sign-to-voice transliterating using simultaneous methodologies. Student will receive and express information effectively, using affect, mood and inflection to match the target language to the source language. Prerequisite: ITP 251, 261, 281 and concurrent enrollment in ITP 252, 282. (SFCC)

ITP 263 — Transliteration III (5 cr)
This course is designed to prepare student for exiting into the community to work as a transliterator in educational settings. Students will receive information in verbal and/or signed form and use appropriate transliteration procedures to relay the information, matching register, intention and content. Students will demonstrate appropriate switching techniques for both sign-to-voice and voice-to-sign, adhering to the Interpreter's Code of Professional Conduct. Prerequisite: ITP 252, 262, 282 and concurrent enrollment in ITP 253, 283. (SFCC)

ITP 281 — Applied Interpreting I (1 cr)
First of three separate opportunities to apply interpreting/transliterating skills. This first course requires observation and voice-to-sign or sign-to-voice in a mock interpreting environment where no Deaf people will be present. The goals of this course are to strengthen stamina in interpreting, predicting skills, and ability to stay within the interpreter's Code of Professional Conduct. Prerequisite: ASL& 223, ITP 233, 243 and concurrent enrollment in ITP 251, 261. (SFCC)

ITP 282 — Applied Interpreting II (2 cr)
This second applied interpreting experience requires experience in the following categories: Observation and voice-to-sign and/or sign-to-voice in an interpreting environment in the public arena where no Deaf people will be present. Prerequisite: ASL& 123, ITP 251, 261, 281 and concurrent enrollment in ITP 252, 262. (SFCC)

ITP 283 — Applied Interpreting III (3 cr)
This is the third practicum and requires experience in the following categories: Observation and voice-to-sign and/or sign-to-voice interpreting/transliterating in an educational environment. Students will be placed in a school program under the supervision of an experienced interpreter/transliterator. Prerequisite: ITP 252, 262, 282 and concurrent enrollment in ITP 253, 263. (SFCC)

INVASIVE CARDIOVASCULAR TECHNOLOGY

ICT 114 — Introduction to Cardiac Care (3 cr)
Introduction to the field of Cardiovascular Technology and the role of the CV Technologist. Stresses the importance of professionalism, ethical behavior, and communications. Introductory study of medical terminology as related to cardiac care. Various discussion groups and tours will be provided. Prerequisite: Enrollment in ICT program or permission of instructor. (SCC)

ICT 115 — Technical Skills - CPR for Health Care Providers (1 cr)
American Heart Association version of health care provider course for CPR/AED. Required for student to enter a patient care clinical environment. Prerequisite: Enrollment in ICT program or permission of instructor. (SCC)

ICT 116 — Acute Coronary Syndrome (1 cr)
A study of the nations number one killer in its acute phase. Pathophysiology of atherosclerosis. The stable versus the unstable patient. Vulnerable plaque types. STEMI versus NSTEMI patient presentations. The national door to balloon initiative. 12 lead EKG recognition of the signs of ischemia/infarct patterns. Prerequisite: Enrollment in ICT program or permission of instructor. (SCC)

ICT 117 — Cardiovascular Pharm 1 (1 cr)
Introduction to cardiovascular pharmacology. A review of control of heart rate, blood pressure, and cardiac output and the common drug groups employed to manipulate these parameters. Prerequisite: Enrollment in ICT program or permission of instructor. (SCC)

ICT 124 — CV Diagnostic Exams (4 cr)
A review of the examinations used today to screen for coronary artery disease. Case studies will be presented from the patient initial presentation through diagnostic workup. Prerequisite: Enrollment in ICT program or permission of instructor. (SCC)

ICT 125 — Hemodynamics (2 cr)
Introduction to various forms of invasive monitoring. Emphasis is placed on the basics of hemodynamic monitoring and interpretation. Normal and pathologic examples are introduced. Prerequisite: Enrollment in ICT program or permission of instructor. (SCC)

ICT 126 — Technical Skills/Reading Hemodynamics (1 cr)
Introduction to various forms of invasive monitoring. Emphasis is placed on the basics of hemodynamic monitoring and interpretation. Normal and pathologic examples are introduced. Supports concepts taught in ICT 125. Prerequisite: Permission of instructor or permission of instructor. (SCC)

ICT 127 — Cardiovascular Pharm 2 (1 cr)
Continuation of ICT 117 Intro to CV Pharm. Advanced Cardiac Life Support drugs are introduced. Pharmacy math is introduced. Pharmacy law is studied. Principles of IV therapy are introduced. Prerequisite: Enrollment in ICT program or permission of instructor. (SCC)

ICT 128 — Technical Skills/Pharmacology (1 cr)
Supports ICT 127 concepts. Case studies of patients during cardiac emergencies will be evaluated for appropriate drug selection. Pharmacy math calculations will be taught. IV therapy techniques will be taught. Prerequisite: Enrollment in ICT program or permission of instructor. (SCC)

ICT 129 — CPR Instructor (1 cr)
American Heart Association CPR Instructor course. Participants will review CPR for Health Care Providers and learn methods to teach the class. Must have a valid HCP card. Prerequisite: Enrollment in ICT program or permission of instructor. (SCC)

ICT 134 — Cath Lab Procedures (3 cr)
This course is an overview of cardiovascular invasive diagnosis and intervention. Includes an introduction to the cardiac catheterization lab through the study of: Catheterization protocols and equipment. Angiographic anatomy of the cardiovascular system, and invasive cardiac measurements and calculations. Labs and tours will be provided. Prerequisite: Enrollment in ICT program or permission of instructor. (SCC)

ICT 135 — Technical Skills Cath Lab Procedures (1 cr)
This is the lab supporting ICT 134. Skills taught will be procedural tables and equipment used in cardiac catheterization. Simulations of vascular access techniques and cannulation of model vascular systems will be utilized. Computer analysis of recorded hemodynamic parameters will be introduced by use of a physiologic monitor. Injector system parameters will be taught. Prerequisite: Enrollment in ICT program or permission of instructor. (SCC)

ICT 138 — Cardiovascular Physiology (4 cr)
This course is an advanced study of normal cardiovascular physiology presented in a series of physician lectures and lab demonstrations with applications in invasive and noninvasive cardiology. Prerequisite: Enrollment in ICT program or permission of instructor. (SCC)

ICT 139 — Radiation Safety (2 cr)
A study of radiation production and safety measures for health care providers. This class will prepare the student to work in the fluoroscopic and cine imaging environment of the cardiac catheterization laboratory. Patient and staff exposure protection are emphasized. Prerequisite: Enrollment in ICT program or permission of instructor. (SCC)

ICT 140 — Surgical Asepsis (1 cr)
Surgical asepsis for health care providers. This class will prepare the student to create a sterile field. Gown and glove themselves and others. Procedural awareness of working in a sterile field will be developed. Prerequisite: Enrollment in ICT program or permission of instructor. (SCC)

ICT 141 — Technical Skills/Surgical Asepsis (1 cr)
This class supports ICT 140. The skills of surgical asepsis and infection control are taught. Working in a sterile field and gowning and gloving are taught. Develop a surgical conscience. Prerequisite: Enrollment in ICT program or permission of instructor. (SCC)

ICT 144 — Patient Care and Assessment (4 cr)
Develop patient care skills specific to patients with cardiovascular disease. Read a medical chart to identify risks for invasive procedures. Understand the expected response of the physician to various patient presentations. Prerequisite: Enrollment in ICT program or permission of instructor. (SCC)

ICT 145 — Technical Skills/Cath Lab Boot Camp/ Patient Care (4 cr)
This class prepares the student to enter the clinical environment of the cardiac catheterization laboratory. Patient care skills and procedural steps will be practiced. Prerequisite: Enrollment in ICT program or permission of instructor. (SCC)

ICT 146 — Cath Lab Clinical I (6 cr)
Initial clinical experience of 160 clock hours. Focus on diagnostic cardiac catheterization procedural participation. Prerequisite: Enrollment in ICT program or permission of instructor. (SCC)

ICT 214 — Cardiac Interventions/PCI (3 cr)
This course will focus on the percutaneous interventions performed in today's cardiac cath lab. Including, but not limited to: Stenting, balloon angioplasty, intravascular ultrasound, atherectomy, thrombectomy, ocular coherence tomography, and other techniques. Prerequisite: Enrollment in ICT program or permission of instructor. (SCC)

ICT 215 — Non Cardiac Vascular (Special) Procedures 1 (2 cr)
This class will explore the cardiovascular diagnostic and interventions in non-cardiac vascular beds. This field is known as "Special Procedures" or Interventional Radiology. Prerequisite: Enrollment in ICT program or permission of instructor. (SCC)

ICT 216 — Electrophysiology 1 Introduction to Devices (2 cr)
This class will introduce the sub-specialty of electrophysiology (EP), this is the first of 2 classes. In this class we will investigate the role of EP in cardiology. A study of diagnostic protocols and implantable devices like pacers and defibrillators will be introduced. Prerequisite: Enrollment in ICT program or permission of instructor. (SCC)

ICT 217 — Technical Skills/PCI/EP/Special Equipment (2 cr)
This skills lab supports the ICT 214, 215 and 216 didactic content. Prerequisite: Enrollment in ICT program or permission of instructor. (SCC)

ICT 218 — Cath Lab Clinical II (5 cr)
This course continues to develop the skills from Cath Lab Clinical I. Students move into more complex procedures, such as percutaneous coronary interventions. Including, but not limited to: Stents, balloon angioplasty, intracoronary ultrasound. Monitor, scrub and circulator roles should be practiced. Prerequisite: Enrollment in ICT program or permission of instructor. (SCC)

ICT 224 — Advanced Practices/Management (5 cr)
This class will focus on advanced practices such as left ventricular assist devices and support of cardiovascular surgery. Another aspect of this class will be to define the operational structure of the health care facility. For profit/not for profit hospitals will be studied. Private physician laboratory management models will be defined. Hospital chain of command will be defined. The emphasis will be for the student to understand and excel in multiple working environments. Prerequisite: Enrollment in ICT program or permission of instructor. (SCC)

ICT 225 — Pediatric Cath (1 cr)
The role of the cath lab in caring for patients with cardiac congenital anomalies will be explored. Prerequisite: Enrollment in ICT program or permission of instructor. (SCC)

ICT 226 — Statistics and Research (1 cr)
Introduction to the medical research protocols and the FDA approval process for drugs and devices. A review of statistics as utilized in medical research. Evaluation of the meaning of scientific reports. Prerequisite: Enrollment in ICT program or permission of instructor. (SCC)

ICT 227 — Electrophysiology 2 Interventions (2 cr)
This class is a continuation of ICT 216 Introduction to EP. EP lab interventions for treatment of cardiac arrhythmias are discussed. Prerequisite: Enrollment in ICT program or permission of instructor. (SCC)

ICT 228 — Technical Skills/Peds/Statistical Analysis/EP (2 cr)
This class supports the didactic content of ICT 224, 225, 226 and 227. Technical skills in the areas of cardiac assist devices, pediatric interventional devices, EP interventional devices. Prerequisite: Enrollment in ICT program or permission of instructor. (SCC)

ICT 229 — Cath Lab Clinical III (5 cr)
This course continues to develop the skills from Cath Lab Clinical II. Students move into more complex procedures and coronary interventions. Prerequisite: Enrollment in ICT program or permission of instructor. (SCC)

ICT 234 — Board Registry (RCIS) Prep Blackboard (4 cr)
This class will prepare the student to sit for the national registry appropriate for work in the cardiac cath lab. This being the RCIS (Registered Cardiovascular Invasive Specialist) registry offered by CCI (Cardiovascular Credentialing International). Prerequisite: Enrollment in ICT program or permission of instructor. (SCC)

ICT 235 — Cath Lab Clinical IV (12 cr)
This course continues to develop the skills from Cath lab Clinical III. Students move into more complex procedures and coronary interventions. Prerequisite: Enrollment in ICT program or permission of instructor. (SCC)

JAPANESE

JAPN& 121 — Japanese I (5 cr)
Elementary Japanese is an introduction to Japanese language; conversation, composition, grammar and written Japanese. Discussion of culture and traditions. (SCC, SFCC)

JAPN& 122 — Japanese II (5 cr)
Elementary Japanese is an introduction to Japanese language; conversation, composition, grammar and written Japanese. Discussion of culture and traditions. Prerequisite: JAPN& 121 or permission of instructor. (SCC, SFCC)

JAPN& 123 — Japanese III (5 cr)
Elementary Japanese is an introduction to Japanese language; conversation, composition, grammar and written Japanese. Discussion of culture and traditions. Prerequisite: JAPN& 122 or permission of instructor. (SCC, SFCC)

JAPN& 221 — Japanese IV (5 cr)
Students increase their fluency and listening comprehension, master 200 kanjis and their "on" and "kun" readings, and learn to read short articles in newspapers and magazines. Prerequisite: JAPN& 123 or permission of instructor. (SCC, SFCC)

JAPN& 222 — Japanese V (5 cr)
Students increase their fluency and listening comprehension, master 200 kanjis and their "on" and "kun" readings, and learn to read short articles in newspapers and magazines. Prerequisite: JAPN& 221 or permission of instructor. (SCC, SFCC)

JAPN& 223 — Japanese VI (5 cr)
Students increase their fluency and listening comprehension, master 200 kanjis and their "on" and "kun" readings, and learn to read short articles in newspapers and magazines. Prerequisite: JAPN& 222 or permission of instructor. (SCC, SFCC)

JAPN 241 — Japanese Conversation and Culture (2 cr)
This is a conversation and culture course that is aimed at students who want to build on their current knowledge of Japanese culture and increase their confidence in communicating at an intermediate level. Students will practice speaking, listening, acquire practical proficiency. This course also familiarizes students with basic oral communication skills with an emphasis on idiomatic expressions, basic grammar and vocabulary to develop functional language skills. Repeatable up to four credits. Prerequisite: Two years of high school level Japanese, equivalent; JAPN& 121, 122. (SFCC)

JOURNALISM

JOURN 101 — College Newspaper Production I (3-5 cr)
Gain practical writing, layout and publishing experience by working on the college newspaper. Students plan, write, edit and design the newspaper that informs, educates and entertains the students, faculty and staff of the college. The newspaper is the creation of students who may earn from 3 to 5 credits. (SCC, SFCC)

JOURN 102 — College Newspaper Production II (3-5 cr)
This course helps students to further refine the writing, layout, and publishing skills developed in JOURN 101 by working on the college newspaper. Students plan, write, edit and design the newspaper that informs, educates and entertains the students, faculty and staff of the college. The newspaper is the creation of students who may earn from 3 to 5 credits. Prerequisite: Must have earned at least a 2.0 or better in JOURN 101. (SCC, SFCC)

JOURN 103 — College Newspaper Production III (3-5 cr)
This course helps students to further refine the writing, layout, and publishing skills developed in JOURN 102 by working on the college newspaper. Students plan, write, edit and design the newspaper that informs, educates and entertains the students, faculty and staff of the college. The newspaper is the creation of students who may earn from 3 to 5 credits. Prerequisite: Must have earned at least a 2.0 or better in JOURN 102. (SCC, SFCC)

JOURN 105 — Computerized Layout and Design for Journalists (2 cr)
This course offers instruction in the use of PageMaker for newsletter or newspaper layout, Adobe Photoshop for scanning photographs and artwork, and CorelDraw for graphics. (SCC)

JOURN 110 — Mass Media (5 cr)
Journalism 110 offers students an objective, thoughtful view of the mass media so that they better understand the impact these media have on our culture and professional lives. In addition to coverage of the traditional media (newspapers, television, radio, film, books), student will venture into emerging media (blogs, podcasts, independent audio documentary). Students will also examine how journalistic ethics, advertising, ownership, access, and the business of media influences modern cultural attitudes and perceptions of reality. Prerequisite: SFCC only: Recommended minimum reading placement score: COMPASS 80, ASSET 40. (SCC, SFCC)

JOURN 201 — College Newspaper Production IV (3-5 cr)
This course helps students to further refine the writing, layout, and publishing skills developed in JOURN 103 by working on the college newspaper. Students plan, write, edit and design the newspaper that informs, educates and entertains the students, faculty and staff of the college. The newspaper is the creation of students who may earn from 3 to 5 credits. It is strongly recommended that a student have completed JOURN 220 before registering for this course. Prerequisite: Must have earned at least a 2.0 or better in JOURN 103. (SCC, SFCC)

JOURN 202 — College Newspaper Production V (3-5 cr)
This course helps students to further refine the writing, layout, and publishing skills developed in JOURN 201 by working on the college newspaper. Students plan, write, edit and design the newspaper that informs, educates and entertains the students, faculty and staff of the college. The newspaper is the creation of students who may earn from 3 to 5 credits. It is strongly recommended that a student have completed JOURN 220 before registering for this course. Prerequisite: Must have earned at least a 2.0 or better in JOURN 201. (SCC, SFCC)

JOURN 203 — College Newspaper Production VI (3-5 cr)
This course helps students to further refine the writing, layout, and publishing skills developed in JOURN 202 by working on the college newspaper. Students plan, write, edit and design the newspaper that informs, educates and entertains the students, faculty and staff of the college. The newspaper is the creation of students who may earn from 3 to 5 credits. It is strongly recommended that a student have completed JOURN 220 before registering for this course. Prerequisite: Must have earned at least a 2.0 or better in JOURN 202. (SCC, SFCC)

JOURN 220 — Introduction to News Writing (5 cr)
The emphasis of this course is on writing clear, concise articles for print or broadcast media. Students learn the basic techniques of organizing news and feature articles. In addition, interviewing skills, note taking and copy reading are stressed. (SCC, SFCC)

JOURN 221 — Digital News Production I (3 cr)
This is the first course in a three-course sequence. It provides students with a news lab environment in which they can apply digital news production skills in a deadline-based setting that mirrors industry. The course focuses on the production of video-based news content, the application of web fundamentals in a news environment and the application of multimedia design skills. Prerequisite: JOURN 103 or 225 or PHOTO 200 or permission of the instructor. (SFCC)

JOURN 222 — Digital News Production II (3 cr)
This course, the second in a three-course sequence, will provide students with a news lab environment in which they can apply digital news production skills in an deadline-based setting that mirrors industry. The course will focus on helping students develop skills for on-air presentation of news content, creating web page templates, creation of motion-based news packages, advanced video and audio editing and the development of an online, interactive portfolio. Prerequisite: JOURN 221. (SFCC)

JOURN 223 — Digital News Production III (3 cr)
This course, the third in a three-course sequence, will provide students with a news lab environment in which they can apply digital news production skills in an deadline-based setting that mirrors industry. The course will focus on all aspects of producing a news broadcast for the Web, on-location live-to-web production, search engine optimization (S.E.O.), podcast development, and the creation of web tutorials and screencasts. Prerequisite: JOURN 222. (SFCC)

JOURN 224 — Advanced News Reporting (5 cr)
This course is designed for students who wish to further refine the skills developed in JOURN 220. Students will focus on column/editorial writing, advanced feature writing, computer-assisted reporting and Associated Press writing style. This will be very writing-intensive course, focusing on both long-form and short-form storytelling techniques used in newspapers, magazines and the web. Prerequisite: 2.0 or better in JOURN 220 or permission of instructor. (SFCC)

JOURN 225 — Multimedia Journalism (5 cr)
This course introduces students to the fundamentals of storytelling in non-print media. By building on the basic newsgathering, interviewing and storytelling skills developed in JOURN 220, students will explore how various media can be employed to help reach disparate audiences in new and innovative ways. Prerequisite: JOURN 220. (SFCC)

JOURN 266 — Cooperative Education Seminar (1-2 cr)
For course description, see Cooperative Education. (SCC)

JOURN 267 — Cooperative Education Work Experience (1-18 cr)
For course description, see Cooperative Education. (SCC)

LEGAL ADMINISTRATIVE ASSISTANT

LSEC 216 — Legal Office Procedures (5 cr)
Students are introduced to the role of lawyers and law office staff in today's legal environment. Students develop and improve skills in maintaining trust accounts, time slips, docket control, law library management, the use of the Uniform System of Citations as a reference tool for legal citations, notary public requirements, trial preparation, law office management, collections and garnishments, courthouse procedures, confidentiality requirements, and positive human relations techniques. Critical thinking skills are addressed. Prerequisite: LSEC 239 and enrollment in the legal administrative assistant program. (SCC)

LSEC 233 — Legal Office Practice (5 cr)
Students study the integration of decision-making with legal office procedures and skills in the areas of contracts, business organizations, real estate, estates and guardianships, and bankruptcy. This course includes five hours of lecture and seven hours of skill development, two of which are arranged. Prerequisite: BT 109 and LSEC 239, and 244 with a 2.0 grade or better, or permission of instructor. (SCC)

LSEC 236 — Legal Terminology (5 cr)
Students learn legal terminology and study ethics, the court system, wills, probates and guardianships, partnerships and corporations, real estate and landlord/tenant law. Prerequisite: Enrolled in the legal administrative assistant program or permission of instructor. (SCC)

LSEC 237 — Legal Terminology (5 cr)
Students learn legal terminology and study litigation, torts, contracts, criminal law, family law, community property, adoptions, change of name and bankruptcy. Prerequisite: Enrolled in the legal administrative assistant program or permission of instructor. (SCC)

LSEC 239 — Legal Formatting (5 cr)
Students develop skills on personal computers, competencies in the production of legal documents used in law-related offices and courts, and critical thinking skills in legal applications. Prerequisite: Keyboarding skills of 40 wpm; BT 102 and 165; and BT 109 or ENGL& 101 with a grade of 2.0 or higher or permission of instructor. (SCC)

LSEC 244 — Legal Machine Transcription (5 cr)
Students develop proficiency in producing rough draft and usable legal copy from voice transcribers. Prerequisite: BT 235 and LSEC 239 with a 2.0 grade or better, or permission of instructor. (SCC)

LSEC 285 — Legal Office Internship (3 cr)
Students apply their office and human relations skills during this two-week internship at a law office or law-related office or court. Sites meet individual needs of students and complement their program. Grading option: Pass/fail. Prerequisite: Permission of program coordinator. (SCC)

LIBRARY AND INFORMATION SERVICES

LMLIB 100 — Introduction to Library Organizations and Careers (3 cr)
Students are introduced to the historical, functional, and organizational structure of libraries. Current library services; philosophy, and terminology are emphasized. Students demonstrate knowledge about the role of the library technician as a member of library organizations. Students will explore professional organizations, employment outlook and identify a possible career path. (SFCC)

LMLIB 115 — Introduction to Library Organizational Systems (5 cr)
Students learn various systems used to organize and recall library materials with an emphasis on classification systems; filing rules; searching library catalog records; and an introduction to database structure. Prerequisite: Can be taken concurrently with LMLIB 100; or taken in sequence or permission of instructor and concurrent enrollment in LMLIB 100. (SFCC)

LMLIB 116 — Introduction to Circulation Systems and Services (5 cr)
Students are introduced to library circulation systems and services by engaging in practical experience using software. Students are introduced to policies associated with circulation services. Prerequisite: Can be taken concurrently with LMLIB 100 and LMLIB 115 or taken in sequence or permission of instructor. (SFCC)

LMLIB 117 — Access Services, Customer Service and Collection Maintenance (5 cr)
Students are introduced to common policies and procedures covering access services including: Inter Library Loan, library security issues, and collection maintenance (shelving, binding and book repair). Students also are introduced to customer service issues and best practices in all types of libraries. Prerequisite: LMLIB 116; Must be taken in sequence or permission of instructor. (SFCC)

LMLIB 125 — School Libraries and Media Centers (5 cr)
This is an introductory course for students interested in school library and media centers management and materials. An overview of the role and function of school libraries and media centers; information literacy standards and media materials management are presented. (SFCC)

LMLIB 126 — School Library Technology and Services for Curriculum Support (3 cr)
Students are introduced to the role of the school library in its capacity of providing curricular support in the K-12 setting. Information literacy; emerging technologies in teaching and learning; and outreach and collaboration with school personnel will be explored. (SFCC)

LMLIB 135 — Children's Literature and Library Services (5 cr)
Fairy tales and other works emerging from oral tradition, picture books, poetry, juvenile novels, non-fiction and informational books will be evaluated in terms of what they have to offer to children. Students will read and review children's literature and view audio-visual media associated with selected children's stories. Students will create presentations using children's literature and examine library services designed for children. (SFCC)

LMLIB 210 — Technical Services I: Acquisitions and Materials Processing (5 cr)
Students utilize bibliographic tools and searching techniques commonly used by libraries in identifying materials to be requisitioned; ordering methods; acquisitions procedures; serials management; and materials workflow is examined. Prerequisite: Must be taken in sequence; or permission of instructor. (SFCC)

LMLIB 220 — Technical Services II: Cataloging (5 cr)
Students will prepare bibliographic descriptions based on Anglo-American Cataloging Rules, 2nd ed., Revised, with emphasis on cataloging from copy. Some original cataloging is covered also, including assignment of main and added entries, assignment of subject headings and classification numbers and assignment of Cutter numbers. Prerequisite: Must be taken in sequence; or permission of instructor. (SFCC)

LMLIB 222 — Reference Services and Outreach (5 cr)
Students examine the function of library technician's role in relation to readers' services and supporting reference services. Students examine programs and outreach services libraries used to reach library users. Prerequisite: Must be taken in sequence; or permission of instructor. (SFCC)

LMLIB 224 — Research Topics and Projects in Library Service (1-3 cr)
The course content is designed to meet specific skill levels for individual students. The course content varies depending on research and/or project and the number of credits chosen and established guidelines allow students to research special areas of interest. Students have the opportunity to refine or expand their library technician skills working on an independent project or topic. All research and/or projects must be agreed upon by the instructor and student. Prerequisite: Permission of instructor. (SFCC)

LMLIB 266 — Cooperative Education Seminar (1-2 cr)
For course description, see Cooperative Education. (SFCC)

LMLIB 267 — Cooperative Education Work Experience (1-6 cr)
For course description, see Cooperative Education. (SFCC)

LINE CONSTRUCTION

LINE 101 — Line Construction I (17 cr)
This course introduces students to line construction basics. Safety training, pole climbing and fundamentals of electricty are emphasized. The safe operation of a variety of equipment is covered. (SCC)

LINE 102 — Line Construction II (16 cr)
This course continues with the concepts introduced in LINE 101. Overhead and underground line construction, radio communications, safety, pole climbing, and interpretation of job prints and standards are emphasized. (SCC)

LINE 103 — Line Construction III (16 cr)
This course continues with advanced concepts in line construction. Radio communications, overhead and underground construction methods, advanced concepts in electricity, and the interpretation of job prints and standards are emphasized. Cooperative education training and certification are also covered. (SCC)

MACHINIST/CNC TECHNOLOGY

MACH 106 — Blueprint Reading (7 cr)
Students learn to demonstrate basic competency in blueprint reading. (SCC)

MACH 107 — Precision Measurement and Tools (3 cr)
Students learn to demonstrate basic competency in the use of precision measurement and tools. (SCC)

MACH 113 — Beginning Blueprint (2 cr)
Students learn basic blueprint reading with emphasis on the accurate interpretation of blueprints and sketches. Prerequisite: Concurrent enrollment in MACH 114, 115 or permission of instructor. (SCC)

MACH 114 — Introduction to Machine Shop I (5 cr)
Students are introduced to the manufacturing processes and the equipment and hardware used to shape and form materials. Practical application includes basic layout techniques, the use of measuring tools and shop safety practices. (SCC)

MACH 115 — Introduction to Machine Tools (5 cr)
Students are introduced to the tools, equipment and processes common to a machine shop with emphasis on their proper selection and use. Prerequisite: Concurrent enrollment in MACH 113, 114 or permission of instructor. (SCC)

MACH 116 — Introduction to Machine Shop II (5 cr)
This course continues with the applications introduced in MACH 114 emphasizing the manufacturing processes, equipment and hardware used to shape and form materials. Basic layout techniques, the use of measuring tools and shop safety practices are stressed. (SCC)

MACH 123 — Machine Tool Operations I (6 cr)
Students are introduced to theory and practical shop experience used in basic machining operations with emphasis on the safe operation of sawing and drilling machines. Prerequisite: MACH 113, 116. (SCC)

MACH 124 — Blueprint II (2 cr)
Students learn theory and practical applications in the basics of shop sketching. Basic lines and forms and freehand lettering are emphasized. Prerequisite: MACH 113 and concurrent enrollment in MACH 123, 125 or permission of instructor. (SCC)

MACH 125 — Machine Shop Math I (1-2 cr)
Students are introduced to the math principles and applications to machine shop procedures. Emphasis range from the calculation of percentages to practical algebra. Prerequisite: MACH 114 and concurrent enrollment in MACH 123, 124 or permission of instructor. (SCC)

MACH 126 — Machine Tool Operations II (7 cr)
This course continues with the concepts introduced in MACH 123. Students acquire practical shop experience in basic machining operations. The safe operation of sawing and drilling machines is emphasized. Prerequisite: MACH 113, 116. (SCC)

MACH 133 — Machine Tool Operations III (7 cr)
This course emphasizes the safe operation of lathes and their accessory equipment. Prerequisite: MACH 123, 126. (SCC)

MACH 134 — Machine Shop Math II (1-2 cr)
This course continues with the concepts introduced in MACH 125. Geometric construction and basic concepts of trigonometry are emphasized. Prerequisite: MACH 125 and concurrent enrollment in MACH 133, 135 or permission of instructor. (SCC)

MACH 135 — Blueprint III (2 cr)
This course continues with the concepts introduced in MACH 113 and 124. Practical experience in the interpretation and generation of special view drawings is emphasized. Prerequisite: MACH 124 and concurrent enrollment in MACH 133, 134 or permission of instructor. (SCC)

MACH 136 — Machine Tool Operations IV (7 cr)
This course continues with the concepts introduced in MACH 133. Practical applications in the safe operation of lathes and their accessory equipment are emphasized. Prerequisite: MACH 123, 126. (SCC)

MACH 138 — Manufacturing Standards/Quality (3 cr)
Students will become aware of the manufacturing standards that are used in composites and aerospace manufacturing industries. Students will learn how to chart Statistical Process Control data and utilize that information to solve problems in the manufacturing process. Students will explore the Material Data Sheet system to understand safety precautions, handling methods and disposal requirements of materials used in the composites industry. In the lab portion of the class students will have an opportunity to apply this theory on practical exercises. Lab time will also be devoted to the use and understanding of Quality Inspection tools used in advanced part inspection. (SCC, IEL)

MACH 201 — Manufacturing Economics (1 cr)
This course is a study of the principles of manufacturing business economics. Profit, customer satisfaction, labor and industries, costs, value added, unit cost, employee benefits and overhead are emphasized. (SCC)

MACH 202 — Manufacturing Resource Management (1 cr)
This course is a study of the principles of manufacturing focusing on production rates, inventory control, budgeting, computer applications and scheduling. (SCC)

MACH 243 — Machine Tool Operations V (8 cr)
This course emphasizes practical applications in the safe operation of vertical and horizontal milling machines. Prerequisite: MACH 133, 136. (SCC)

MACH 244 — Blueprint IV (2 cr)
This course presents theory and practical applications in the identification of structural steel shapes on blueprints. The generation of dimensioned working sketches of specific parts is emphasized. Prerequisite: MACH 125 and concurrent enrollment in MACH 243 or permission of instructor. (SCC)

MACH 246 — Machine Tool Operations VI (5 cr)
This course continues with the concepts introduced in MACH 243. Practical applications in the safe operation of vertical and horizontal milling machines are emphasized. Prerequisite: MACH 133, 136. (SCC)

MACH 247 — CNC Theory (5 cr)
Students learn to demonstrate basic competency in CNC programs and the operation of mills and lathes. (SCC)

MACH 248 — CNC Lab (5-7 cr)
This course continues with the concepts introduced in MACH 247 to prepare students to demonstrate basic competency in the manufacturing of CNC programs and the operation of mills and lathes. (SCC, IEL)

MACH 249 — Quality Control (4 cr)
This course prepares students to demonstrate competency in areas of manufacturing including quality control and part inspection, precision measurements, and the engineers' interpretation of drawings. (SCC)

MACH 250 — CNC Production Theory (5 cr)
This course prepares students to demonstrate competency in areas of the manufacturing industry that include basic CNC programming, intermediate CNC milling and turning operations, and CNC production. (SCC)

MACH 251 — CNC Production Lab (7 cr)
This course continues with the concepts introduced in MACH 250 preparing students to demonstrate competency in areas of the manufacturing industry that includes basic CNC programming, intermediate CNC milling and turning operations, and CNC production. (SCC)

MACH 253 — Machine Tool Operations VII (6 cr)
This course offers advanced applications in gears and gear cutting, and the use of rotary tables and indexing devices. The setup and calculation of machines for cutting are introduced. Prerequisite: MACH 243, 246. (SCC)

MACH 254 — Blueprint V (2 cr)
This course introduces practical applications in the generation of multiscale, assembly and detail drawings. Prerequisite: MACH 244 and concurrent enrollment in MACH 253 or permission of instructor. (SCC)

MACH 256 — Machine Tool Operations VIII (6 cr)
This course continues with the applications presented in MACH 253 emphasizing advanced applications in gears and gear cutting, and the use of rotary tables and indexing devices. Prerequisite: MACH 243, 246. (SCC)

MACH 257 — Computer Aided Machining (2-5 cr)
Students are introduced to the theory and practice of machine processes controlled by computers. Milling center and turning center functions, the role of the computer in controlling machine functions, and basic tool processes and machining practices are emphasized. Prerequisite: Machinist experience or permission of instructor. (SCC)

MACH 258 — Advanced Computer Aided Machining (2-5 cr)
This course continues with the concepts introduced in MACH 257 with emphasis on the practical application of producing two-dimensional drawings in computer aided design (CAD), creating a computer aided manufacturing post-process of the drawing, transferring the output to a milling center, and finalizing the practices with a completed machine product from stock materials. Prerequisite: MACH 257 or permission of instructor. (SCC)

MACH 261 — CNC Production Applications (6 cr)
This course focuses on modern computer-numeric control (CNC) production techniques common to small and large manufacturers. Students participate in actual production applications on CNC milling and turning centers and the use of self-developed computer programs. (SCC)

MACH 262 — CNC Programming (3 cr)
Students learn to program CNC machining centers using computer languages common to the industry. (SCC)

MACH 263 — Machine Tool Operations IX (7 cr)
Students are introduced to the practical applications in grinding and abrasive machining processes. Prerequisite: MACH 253, 256. (SCC)

MACH 264 — Machine Tool Operations X (6 cr)
This course continues with the applications introduced in MACH 263 emphasizing advanced applications in grinding and abrasive machining processes. Prerequisite: MACH 253, 256. (SCC)

MACH 266 — Cooperative Education Seminar (1-2 cr)
For course description, see Cooperative Education. (SCC)

MACH 267 — Cooperative Education Work Experience (1-18 cr)
For course description, see Cooperative Education. (SCC)

MACH 288 — Cooperative Education Work Experience (No Seminar) (1-18 cr)
For course description, see Cooperative Education. (SCC)

MACH 295 — Quality Technician (1-10 cr)
Students are introduced to the practical applications in grinding and abrasive machining processes. (SCC)

MANAGEMENT

MMGT 100 — Supervised Volunteer Experience (1-3 cr)
Approved supervised volunteer community service experience in a nonprofit, government or service organization that teaches students the value of contributing back to the community in which they live and work. Students may receive variable credits for hours of approved supervised experience during a quarter. One credit is given for every 33 hours of volunteer experience documented. Grade option: Pass/fail. (SCC)

MMGT 101 — Principles of Management (5 cr)
Fundamental principles of management as applied to business enterprise. Actual business situations are studied by applying basic management principles. Prerequisite: BUS& 101 or permission of instructor. (SCC, SFCC)

MMGT 102 — Personal Selling (3 cr)
This course introduces students to the techniques needed to be an effective salesperson. Content areas include the personal selling environment, planning the sales call, negotiating, and confirming and closing sales. (SCC)

MMGT 103 — Goal Development (1 cr)
A course designed to teach students the basic principles of goal development. Students are able to apply the principles learned in both a business setting and other situations. (SCC)

MMGT 104 — Time Management Techniques (1 cr)
A course designed to teach students the basic principles of time management. Students are able to demonstrate good time management techniques in the business world. (SCC)

MMGT 111 — Mid-Management Seminar (1-2 cr)
A conference course for students enrolled in the mid-management program. Emphasis is on experiences and activities designed to practice and develop management qualities and the acceptance of responsibilities. (SFCC)

MMGT 112 — Mid-Management Seminar (1-2 cr)
A conference course for students enrolled in the mid-management program. Emphasis is on experiences and activities designed to practice and develop management qualities and the acceptance of responsibilities. (SFCC)

MMGT 113 — Mid-Management Seminar (1-2 cr)
A conference course for students enrolled in the mid-management program. Emphasis is on experiences and activities designed to practice and develop management qualities and the acceptance of responsibilities. (SFCC)

MMGT 123 — Managing Strategies and Responsibilities (3 cr)
Students learn basic critical thinking skills, how to enhance performance expectations, strategies for managing time and handling stress. Also team decision making, coaching skills and techniques for problem-solving situations with facilitated problem-solving sessions are practiced. (SFCC)

MMGT 125 — Social Media Marketing (5 cr)
This course provides an introduction to social media marketing (SMM). Special emphasis is placed on creating a social media marketing plan which uses social media platforms to positively influence consumers toward a brand, product, or service. (SCC, SFCC)

MMGT 126 — Search Engine Marketing (5 cr)
Search Engine Marketing is the process of promoting a Web site through both search engine optimization and search advertising. This course examines ways to improve traffic to the Web site by improving the ranking in search engine results and paid advertising. (SFCC)

MMGT 128 — Social Media Marketing Campaign (5 cr)
Students will complete a social media marketing campaign for an organization. Students will identify the organization's target market and the social media portals where they participate; set measurable goals; design innovative strategies and select appropriate social media portals, craft compelling content to attract and influence the intended audience, monitor and measure progress on a regular basis, and tune the social media marketing campaign to account for the ever changing nature of consumer tastes and the social Web. (SCC, SFCC)

MMGT 181 — Leadership Training-DEC (1-5 cr)
Students participate in practical applications of management and leadership techniques. These courses are associated with membership in Delta Epsilon Chi, a division of DECA. (SCC, SFCC)

MMGT 182 — Leadership Training-DEC (1-5 cr)
Students participate in practical applications of management and leadership techniques. These courses are associated with membership in Delta Epsilon Chi, a division of DECA. (SCC, SFCC)

MMGT 183 — Leadership Training-DEC (1-5 cr)
Students participate in practical applications of management and leadership techniques. These courses are associated with membership in Delta Epsilon Chi, a division of DECA. (SCC, SFCC)

MMGT 191 — Leadership Training-DEC (1-5 cr)
Students participate in practical applications of management and leadership techniques. These courses are associated with membership in Delta Epsilon Chi, a division of DECA. (SCC, SFCC)

MMGT 192 — Leadership Training-DEC (1-5 cr)
Students participate in practical applications of management and leadership techniques. These courses are associated with membership in Delta Epsilon Chi, a division of DECA. (SCC, SFCC)

MMGT 193 — Leadership Training-DEC (1-5 cr)
Students participate in practical applications of management and leadership techniques. These courses are associated with membership in Delta Epsilon Chi, a division of DECA. (SCC, SFCC)

MMGT 205 — Small Business Planning (5 cr)
The preparation of a small business plan for starting a small business. The plan will include business description, characteristics of the entrepreneur and the business planner, ownership, analysis of the industry, target customers and location, start-up costs, financial projections, and necessary licenses. The design of the course is to have a document to present to a possible lender or investor. (SCC)

MMGT 211 — Marketing (5 cr)
Introduction to the field of merchandise marketing; distribution of goods and services from producer to consumer and the place of marketing in our economy. Prerequisite: BUS& 101 or permission of instructor. (SCC, SFCC)

MMGT 212 — Retailing (5 cr)
Fundamentals of retailing including retail store operation, organization, merchandise management, sales promotion, customer relations and control. Prerequisite: BUS& 101 or permission of instructor. (SCC)

MMGT 218 — Fundamentals of Advertising (5 cr)
Introduction to the field of advertising: Planning, directing and coordinating advertising functions as a tool of marketing. Prerequisite: SCC only: BUS& 101 or permission of instructor. (SCC, SFCC)

MMGT 220 — Professional Sales (3 cr)
Introduction to the principles and techniques of sales promotion. Develop an understanding of factors and personality traits necessary for professional sales. (SFCC)

MMGT 221 — Presentation Skill Building (1 cr)
Development of basic skills in preparing and presenting short, prepared and impromptu speeches. Emphasis is given to poise and improved confidence in front of the public. Grading option: Pass/fail. (SFCC)

MMGT 223 — Customer Service (3 cr)
This course focuses on creating and maintaining positive customer relations. Efficient and effective ways to deliver quality service and products are presented. Projecting a professional image, communicating with customers and handling complaints effectively, maintaining time management, and working with culturally diverse clients are emphasized. (SCC, SFCC)

MMGT 231 — Human Resource Management (5 cr)
Techniques and principles of personnel supervision and administration including employee recruitment, job analysis, affirmative action, labor relations, compensation, performance appraisal, interviewing, motivation, training and development, and employee health and safety. (SCC, SFCC)

MMGT 232 — Project Leadership (5 cr)
The course introduces current leadership and teambuilding theories and builds the skills, needed to successfully lead others in various organizational contexts and in project management environment. The focus is on facilitating students' awareness of their own competencies as leaders and team members through completion of self-assessment activities, interactive discussions and analyses of cases, simulations, general discussion and experiential learning. (SCC)

MMGT 240 — Management Information Systems (5 cr)
This course explores the information revolution in business. It focuses on the Internet and global communications, the globalization of markets, and the management of information systems. Prerequisite: CIS 110. (SCC)

MMGT 242 — Project Management (2.5 cr)
Examines project management theory and practices from a managerial perspective. Students define a project, create project objectives, determine resource requirements and create a project plan and schedule. Students will implement the concepts, tools and skills developed in this course while they successfully complete a business project. Prerequisite: Concurrent enrollment in CATT 241. (SCC)

MMGT 243 — Fundamentals of Project Management (5 cr)
Project management is an effective method for executing and completing projects on time and within budget. Students will gain a working knowledge of the fundamentals of project management and be able to immediately use that knowledge to effectively manage work projects. This course introduces the concepts and methods required for creating a plan and effectively managing project scope, time, cost, human resources, communication, risk, and procurement management to produce quality deliverables. (SCC)

MMGT 245 — Introduction to Consulting (2 cr)
This course introduces students to the information and procedures required to start a consulting business. Course content includes an in-depth study of business structure, business location, necessary government forms, equipment, supply and insurance needs, budgeting and accounting requirements, pricing considerations, and marketing strategies. (SCC)

MMGT 251 — Transportation Systems (3 cr)
This course will expose students to the major aspects of business logistics. Students will learn about modes of transportation, documents involved in the transportation of goods, and issues concerning rate negotiations. This course utilizes a "hands-on" approach in order for students to take information and apply it to their current and future work assignments. (SFCC)

MMGT 252 — Principles of Purchasing (3 cr)
This course provides the foundation of purchasing, supply contracts, and leasing including a knowledge of the laws governing the regulation of purchasing, contracts, leases, and out-sourcing. (SFCC)

MMGT 253 — Inventory Management (3 cr)
This course will introduce the concept of inventory and the relationship it has to a business. Students will become familiar with inventory systems, purchasing, and completing documentation. (SFCC)

MMGT 254 — Logistics and Supply Chain Management (3 cr)
This course will introduce students to the role of the logistics processes within the business environment. Students will develop and apply analytical and problem solving skills to find solutions to real-world issues. (SFCC)

MMGT 255 — Warehouse and Distribution Management (3 cr)
This course will familiarize students with the role of the warehousing function in the economy and its relationship to the logistics process. Students will develop and apply analytical and problem solving skills to find solutions to real-world issues. (SFCC)

MMGT 266 — Cooperative Education Seminar (1-2 cr)
For course description, see Cooperative Education. (SCC)

MMGT 267 — Cooperative Education Work Experience (1-18 cr)
For course description, see Cooperative Education. (SCC, SFCC)

MMGT 288 — Cooperative Education Work Experience (No Seminar) (1-18 cr)
For course description, see Cooperative Education. (SCC)

MMGT 295 — Management Workshop (0.5-3 cr)
This course focuses on current trends, unique needs or areas not covered in existing management classes. (SFCC)

MATHEMATICS

MATH 020 — Mathematics Center 1 (1-5 cr)
This course covers basic fundamentals of arithmetic including whole numbers, fractions, decimals, ratios, proportions and percentages. It is offered as a variable credit individualized program and designed for students who have a limited background in math. (SCC, SFCC)

MATH 021 — Developmental Math (5 cr)
This course covers basic fundamentals of mathematics for students who need review of numerous topics taught between grades seven and twelve. Whole numbers, fractions, decimals, ratios, proportions, percentages, powers and roots, integers, and algebraic equations are emphasized. (SCC, SFCC)

MATH 030 — Introduction to Texas Instruments Calculators (1 cr)
This course introduces Texas Instruments graphing calculators to students taking MATH 099 or above. Basic calculator functions, graphing and equation solving, and regression equations are emphasized. Prerequisite: Assessment of placement into MATH 099 or higher. (SCC, SFCC)

MATH 035 — The Metric System (1 cr)
Audio-tutorial learning program offered through the math center with emphasis on learning to use metric units naturally: To conceptualize in meters, liters, grams, degrees, Celcius, etc., without tedious conversions from the customary U.S. units. (SFCC)

MATH 070 — Basic Mathematics I (2 cr)
This course is the first course in a three course sequence which is intended for students who have studied Arithmetic but are not ready for Elementary Algebra. Topics will include whole numbers, integers and statistics. Prerequisite: Appropriate placement score. (SFCC)

MATH 071 — Basic Mathematics II (2 cr)
This course is the second course in a three course sequence which is intended for students who have studied Arithmetic but are not ready for Elementary Algebra. Topics will include fractions, decimals and percents. Prerequisite: MATH 070 with a 2.0 or better. (SFCC)

MATH 072 — Basic Mathematics III (2 cr)
This course is the third course in a three course sequence and is intended for students who have studied Arithmetic but are not ready for Elementary Algebra. Topics will include ratios, proportions, geometry and an introduction to algebra. Prerequisite: MATH 071 with a 2.0 or better. (SFCC)

MATH 089 — Math Prep for the Sciences (1 cr)
This course provides a mathematical foundation for students who will be taking introductory science courses. Subjects covered include the metric system, dimensional analysis, scientific notation, significant figures using a scientific calculator, and translating word problems from all areas of science. (SCC)

MATH 090 — Pre-Algebra (5 cr)
A course intended for students who have studied arithmetic but who are not ready for elementary algebra. Numerous introductory topics from grades 9 through 12 are covered which may include operations with signed numbers and rational numbers, simple algebraic equations, properties of real numbers, prime numbers and factoring, exponents and roots, geometric concepts, basic graphs, metrics, basic inequalities, or absolute value. Prerequisite: MATH 021 with 2.0 or better or appropriate placement score. (SCC, SFCC)

MATH 091 — Elementary Algebra I (5 cr)
This course covers beginning algebra concepts for students without high school algebra or those who need a review. Topics will include real numbers, algebraic expressions, equations and inequalities, polynomials and graphing. Other topics may include factoring. Prerequisite: MATH 021 or 090 with a 2.0 or better within the last three years; or appropriate placement score. (SCC, SFCC)

MATH 092 — Elementary Algebra II (5 cr)
This course is a continuation of MATH 091. Topics include factoring, rational expressions, linear equations in two variables and systems of equations. Other topics may include radicals and quadratic equations. Prerequisite: MATH 091 with a 2.0 or better within the last three years; or appropriate placement score. (SCC, SFCC)

MATH 093 — Algebra I (5 cr)
This course covers beginning algebra concepts for students without high school algebra or those who need a review. Topics will include algebraic expressions, linear equations, lines, linear regression, inequalities, and graphing. Prerequisite: MATH 090 or 091 with a 2.0 or better; or appropriate placement score. (SFCC)

MATH 094 — Algebra II (5 cr)
This course is a continuation of MATH 093. Topics include exponents, radicals, power functions, quadratic (models, equations, translations),and right angle trigonometry. Prerequisite: MATH 092 or 093 with a 2.0 or better within the last three years or appropriate placement score. (SFCC)

MATH 095 — Mathematics Center 2 (1-5 cr)
This course reviews arithmetic and pre-algebra and is offered as a variable credit individualized program in the Math Center for students preparing to take algebra. Prerequisite: Counselor or instructor referral. (SCC, SFCC)

MATH 096 — Introductory Algebra (5 cr)
This course covers introductory algebra skills. Topics include signed numbers, linear equations, graphing linear equations, linear systems of equations, polynomials and rational expressions. This course is designed for students who need a review of high school algebra. Prerequisite: MATH 021 or 090 with a 3.0 or better within the last three years; or appropriate placement score. (SCC, SFCC)

MATH 097 — Intermediate Algebra: A Modeling Approach (5 cr)
This course covers intermediate algebra skills through a modeling approach. Topics include linear, quadratic and exponential functions, and introductions to geometry, probability, sequences and statistics. Prerequisite: MATH 091 and 092 or MATH 096 with a 2.0 or better within the last three years; or appropriate placement score. (SCC)

MATH 098 — Algebra III (5 cr)
This course is a continuation of MATH 094 and covers intermediate algebra skills. Topics include sequences, rational expressions and equations, basic functions that include but are not limited to absolute value, exponential and logarithmic. Prerequisite: MATH 094 with a 2.0 or better or an appropriate placement score. (SFCC)

MATH 099 — Intermediate Algebra (5 cr)
This course covers intermediate algebra skills. Topics include a review of beginning algebra concepts, radicals, inequalities, functions and quadratic functions. Other topics may include exponential and logarithmic functions. Prerequisite: MATH 091 and 092 or 096 with a 2.0 or better within the last three years; or appropriate placement score. (SCC, SFCC)

MATH 100 — Vocational Technical Mathematics (1-6 cr)
Basic mathematics from whole numbers through elementary algebra and triangle trigonometry to fulfill the needs of professional/technical students at their current mathematical level. Courses are offered and objectives and credits determined by contract between math department and the requesting professional/technical program. Prerequisite: Registration in the requesting vocational area or permission of instructor. (SCC, SFCC)

MATH& 107 — Math in Society (5 cr)
This course is an option for students needing to satisfy a post-intermediate algebra requirement in which the field of study does not necessitate a specific course. Traditional coursework is combined with a discussion of what mathematics is and does, in addition to an examination of problem-solving techniques. Specific topics may vary at the discretion of the instructor. Prerequisite: MATH 097, 098 or 099 with a 2.0 or better within the last three years or appropriate placement score. (SCC, SFCC)

MATH 108 — College Algebra (3 cr)
This course bridges the gap between Intermediate Algebra and the next higher level math classes, specifically Pre-calculus. Topics in this course include, but are not limited to, functions, graphing, exponents, radicals, algebraic fractions, equations, inequalities, and various applications including the use of the graphing calculator. Course is not intended for students who have earned at least a 3.0 in MATH 099 or a 3.0 in MATH 098. Prerequisite: MATH 097, 098 or 099 with a 2.0 or better within the last three years or appropriate placement score. (SCC, SFCC)

MATH& 141 — Precalculus I (5 cr)
This course covers college algebra skills, which include polynomial, rational, exponential and logarithmic functions, systems of equations and matrix solutions, and graphs of polynomial functions. Other topics may include sequences, series and summations. Prerequisite: SFCC: MATH 097, 098 or 099 with a 3.0 or better within the last three years or MATH 108 with a 2.0 or better or appropriate placement score. College level reading scores recommended. SCC: MATH 098 or 099 with a 3.0 or better within the last three years; or MATH 108 with a 2.0 or better within the last three years or appropriate placement score. (SCC, SFCC)

MATH& 142 — Precalculus II (5 cr)
This course introduces circular functions and analytic trigonometry needed for further study in mathematics. Other topics include sequences and series, mathematical induction, conic sections, rotation and translation of axes, DeMoivre's theorem and nth roots of complex numbers, or vectors in the plane. Prerequisite: MATH& 141 with a 2.0 or better within the last three years; or appropriate placement score. (SCC, SFCC)

MATH& 148 — Business Calculus (5 cr)
A one-quarter introduction to differential and integral calculus. Specifically oriented for students in management, life sciences and social sciences. Prerequisite: MATH& 141 or MATH 201 with a 2.0 or better within the last three years; or appropriate placement score. (SCC, SFCC)

MATH& 151 — Calculus I (5 cr)
This is the first quarter of a three-quarter course in calculus and analytic geometry. This course includes an introduction to limits, rates of change and continuity. The course also deals with the definition of derivative of a function and rules of differentiation, curve sketching and other application of differentiation, introduction to integrals and the Fundamental Theorem of Calculus. Prerequisite: MATH& 141 and MATH& 142 with a 2.0 or better within the last three years; or appropriate placement score. (SCC, SFCC)

MATH& 152 — Calculus II (5 cr)
This is the second quarter of a three-quarter course in calculus and analytic geometry. This course also includes applications of integration, derivatives and integrals of exponential, logarithmic and the trigonometric functions, derivatives and integrals of hyperbolic functions and their inverses, indeterminate forms and L'Hopital's Rule, and techniques of integration. Other topics may include vectors and the geometry of space. Prerequisite: MATH& 151 with a 2.0 or better. (SCC, SFCC)

MATH& 153 — Calculus III (5 cr)
This is the third quarter of a three-quarter course in calculus and analytic geometry. This course includes an introduction to differential equations; parametric equations; polar, cylindrical and spherical coordinates; infinite sequences and series. Cylindrical and quadric surfaces, vector valued functions and their space curves, and derivatives and integrals of vector functions also are discussed. Prerequisite: MATH& 152 with a 2.0 or better. (SCC, SFCC)

MATH 201 — Introduction to Finite Mathematics (5 cr)
This course covers basics of mathematical models, including linear, quadratic and polynomial functions, systems of linear equations and inequalities, linear programming and matrices. Elementary concepts of probability and simulation are introduced. Particular emphasis is placed on business and social applications. Prerequisite: MATH 097, 098 or 099 with a 2.0 or better within the last three years; or appropriate placement score. College level reading scores recommended. (SCC, SFCC)

MATH 208 — Mathematics for Elementary Education - A (5 cr)
This is the first course in a three course sequence designed for prospective teachers at the elementary school level, focusing on the following topics: Problem solving, set theory, elementary logic, numeration systems, number theory, and the structure of the system of real numbers. Prerequisite: MATH 097, 098 or 099 with a 2.0 or better; or appropriate placement score. College level reading score recommended. (SCC, SFCC)

MATH 209 — Mathematics for Elementary Education - B (5 cr)
This is the second course in a three course sequence designed for prospective teachers at the elementary school level, focusing on the following topics: Statistics, probability, and the structure of the system of real numbers including integers, rational and irrational numbers. Prerequisite: MATH 208 with a 2.0 or better. (SCC, SFCC)

MATH 210 — Mathematics for Elementary Education - C (5 cr)
This is the last course in a three course sequence designed for prospective teachers at the elementary school level, focusing on the following topics: Problem solving, structures of geometry, to include shapes, measurements, triangle congruencies, and the coordinate system. Prerequisite: MATH 208 with a 2.0 or better. (SCC, SFCC)

MATH 211 — Mathematics for Elementary Education I (5 cr)
This is the first course in a sequence designed for prospective teachers at the elementary school level, focusing on the following topics: Set theory, numeration systems, number theory, the structure of the system of real numbers and problem solving. Prerequisite: Math 097, 098, or 099 with a 2.0 or better; or appropriate placement score. College level reading score recommended. (SCC, SFCC)

MATH 212 — Mathematics for Elementary Education II (5 cr)
This is the second course in a sequence designed for prospective teachers at the elementary school level, focusing on the following topics: Statistics, geometry and measurement. Prerequisite: MATH 211 with a 2.0 or better within the last three years; or appropriate placement score. (SCC, SFCC)

MATH 213 — Geometry (5 cr)
This course is an introduction to the structure of geometry, the deductive reasoning process, and geometric figures and their properties. Euclidean and non-Euclidean topics are covered. Prerequisite: MATH 098 or 099 with a 2.0 or better within the last three years; or appropriate placement score. (SFCC)

MATH 220 — Elementary Linear Algebra (5 cr)
Introduction to linear transformations, matrix theory, vector products, finite dimensional spaces, subspaces, spanning sets, bases, eigenvalues and eigenvectors. Prerequisite: MATH& 152 with a 2.0 or better. (SFCC)

MATH 221 — Introduction to Probability and Statistics (5 cr)
Descriptive statistics, probability, probability distributions, sampling methods, hypothesis testing, statistical inference, correlations, regression and analysis of variance are covered in this course. Prerequisite: MATH 097, 098 or 099 with a 2.0 or better within the last three years; or appropriate placement score. College level reading scores recommended. (SCC, SFCC)

MATH 225 — Foundations of Mathematics (5 cr)
This course serves as an introduction to basic concepts of post-calculus mathematics. Topics include logic, methods of proof, set theory, relations and functions. Prerequisite: MATH& 152. (SFCC)

MATH 245 — Discrete Mathematics (5 cr)
An introduction to the theory of the mathematics found in computer science. Topics include logic, proofs, sets, counting, probability, matrices, functions and relations, graphs, and trees. Prerequisite: MATH& 151. (SCC, SFCC)

MATH& 254 — Calculus IV (5 cr)
A course designed to give students an introduction to the basic concepts of multivariable calculus using the tools of linear algebra as applicable; vector functions, real valued functions, differentiation of scalar functions, multiple integration, vector differentiation and integration, transformation of coordinates, Green's Theorem, Stoke's Theorem, Gauss' Theorem and Lagrange Multipliers. Prerequisite: SFCC: MATH& 153, MATH 220 with a 2.0 or better. SCC: MATH& 153 with a 2.0 or better. (SCC, SFCC)

MATH 274 — Elementary Differential Equations (5 cr)
An introduction to ordinary differential equations. Elementary methods of solutions to first-order equations, linear equations of second and higher order, and systems of first-order linear equations. Power series solutions, numerical methods and Laplace Transforms also are covered. Prerequisite: MATH& 153, MATH 220 with a 2.0 or better. (SFCC)

MECHANICAL ENGINEERING TECHNOLOGY

MET 101 — Introduction to Engineering (2 cr)
This course is an overview of engineering careers, applying concepts and general elements of professionalism, strategies, and computer applications for the engineering office. Basic sketching skills, file management commands, computer terminology, data communication concepts, CAD principles and the practical application of relevant software packages are emphasized. (SCC)

MET 103 — Introduction to Computers for Technology (2-5 cr)
Students learn computer concepts and general elements of a computer system. Basic keyboarding skills, file management commands, computer terminology, data communication concepts, introductory CAD principles and/or the practical application of relevant software packages are emphasized. (SCC)

MET 113 — Computer Fundamentals for Engineering (5 cr)
This course introduces computer concepts and general elements of a computer system. Basic keyboarding skills, file management commands, computer terminology, data communication concepts, CAD principles and the practical application of relevant software packages are emphasized. (SCC)

MET 115 — Technical Mathematics (5 cr)
This course includes theory and practical application of math concepts with an extensive study of the fundamentals of algebra. (SCC)

MET 123 — Applied Technical Mathematics (5 cr)
This course continues with the concepts introduced in MET 115 to prepare students for advanced-level math. Basic and advanced algebra are reviewed, and an introduction to practical geometry and trigonometry also is presented. Prerequisite: MET 115. (SCC)

MET 125 — Introduction to Computer Aided Design (3-5 cr)
Students are introduced to the fundamentals of computer aided design (CAD). AutoCAD software as it applies to drawing in a format using the principles of mechanical, architectural, civil and electrical/electronics is emphasized. Prerequisite: MET 113 or CIS 105; ARCHT 112; or approved equivalent. (SCC)

MET 127 — Manufacturing Processes (3 cr)
This course is a comprehensive study of the processing of materials, industry standards and manufacturing techniques used in industry. (SCC)

MET 133 — Introductory Applied Physics (3 cr)
Students are introduced to the basic concepts of our physical world. This course has minimal computational requirements, therefore little math background is required. (SCC)

MET 134 — Applied Precision Measuring (1-3 cr)
Areas of emphasis in this course will include the terminology and use of measuring instruments for fabrication and machining, for layout work, and to determine compliance with dimensions and tolerances on engineering drawings. Covers the fundamental skills required to perform basic and precision dimensional measurements and an introduction to the concepts of Statistical Process Control (SPC). Gain proficiency in using rules, scales, tape meaures, protractor, calipers, lasers, micrometers, dial gage, height gage and coordinate measuring machine. (SCC, IEL)

MET 137 — Applied Technical Mathematics II (5 cr)
This course continues with the concepts introduced in MET 123. A review of algebra and an in-depth study of practical geometry and trigonometry are presented. Prerequisite: MET 123. (SCC)

MET 139 — Hydraulics/Pneumatics (3 cr)
Students are introduced to the application, uses and design of hydraulic and pneumatic components used in industry. Students learn the basics of circuit design. (SCC)

MET 242 — Mechanical Design Fundamentals (4 cr)
This course is a comprehensive study of the design and drawing of machinery components including fasteners, springs, gears, belt drives, chain drives, couplings and bearings. (SCC)

MET 245 — Applied Physics (5 cr)
This course introduces basic concepts of our physical world. Application of physics laws using algebra, trigonometry and geometry is employed. A minimum math background equal to MATH 100 or MET 123 is required to meet computational requirements. Prerequisite: MATH 100 or MET 123. (SCC)

MET 247 — Shop Practices (2 cr)
This course introduces safety practices in the shop. Students learn the basic operation techniques of the lathe, mill, drill press, and various hand and power tolls used in a typical shop. Joining techniques such as welding, brazing, soldering and mechanical fasteners are included. (SCC)

MET 250 — Strength of Materials/Materials Science (5 cr)
Students study the strength of materials and the effects of stress. Types of stress and deformation, stress-strain diagrams, stress analysis and design problems are emphasized. Applied machine design, and structural and beam design projects are included. Study the characteristics of a variety of materials including specifications, tolerance, weight, and heat treating capabilities. Prerequisite: MET 245. (SCC)

MET 253 — Materials Science (2 cr)
This course is a comprehensive study of the characteristics of a variety of materials including their standards and specifications, tolerance, weight, and heat treating capabilities. Prerequisite: MET 245. (SCC)

MET 254 — Statics (5 cr)
Students study forced systems including vector force principles, forces and reactions at supports, force vector diagrams, coplanar force systems, stresses in truss systems and applied problems. Prerequisite: MET 245. (SCC)

MET 255 — Technical Applications I (3-5 cr)
Students practice applied projects related to engineering technology that include interdepartmental projects, CAD design, shop skills and computer applications. This course may substitute cooperative education courses. Prerequisite: MET 247. (SCC)

MET 262 — Electrical Theory for Engineering (5 cr)
This course introduces the concepts of basic electrical theory including alternating and direct current. Component identification and manufacturing processes of printed circuit boards, integrated circuits and wiring hardware are emphasized. Students learn to read and create electrical schematic diagrams and flow/logic charts. (SCC)

MET 263 — Machine Controls (2 cr)
The course introduces machine control systems. Students identify and design electro-mechanical, electronic and hydraulic, and pneumatic control systems. The function of programmable logic controllers and basic programming techniques are emphasized. (SCC)

MET 264 — Technical Applications II (2-5 cr)
This course continues with the applications offered in MET 255 with emphasis on special projects related to manufacturing practices and shop personnel interactions. Prerequisite: MET 255. (SCC)

MET 266 — Cooperative Education Seminar (1-2 cr)
For course description, see Cooperative Education. (SCC)

MET 267 — Cooperative Education Work Experience (1-18 cr)
For course description, see Cooperative Education. (SCC)

MET 288 — Cooperative Education Work Experience (No Seminar) (1-18 cr)
For course description, see Cooperative Education. (SCC)

MEDICAL ASSISTANT

MA 101 — Administrative Medical Assistant I (5 cr)
This course introduces students to the medical assistant profession and the office environment. Professional organizations, federal regulations and requirements, and legal concepts for the field are emphasized. Prerequisite: Admission into the medical assistant program and CIS 110. (SCC)

MA 102 — Clinical Medical Assistant I (3 cr)
This course introduces students to hands-on patient care. Topics include the role of the medical assistant in patient care, nutrition, vital signs and measurements. Prerequisite: Admission into the medical assistant program and CIS 110. (SCC)

MA 107 — Basic Medical Assisting (5 cr)
Students are introduced to the basic skills and knowledge necessary for medical assistants in a typical medical office environment. Prerequisite: HED 105. (SCC)

MA 111 — Administrative Medical Assistant II (3 cr)
Students work with medical office computer applications. Medical records and patient scheduling are introduced. Other topics include written communications and provider schedule management. Prerequisite: MA 101, 102. (SCC)

MA 112 — Clinical Medical Assistant II (5 cr)
This course submerges students in the clinical phase of medical assisting. Topics include patient history, interviews and documentation, asepsis, infection and disease control, basic physical exams, principles of x-ray and EKG equipment, rehabilitative medicine, emergencies, and first aid. Prerequisite: MA 101, 102. (SCC)

MA 121 — Administrative Medical Assisting (5 cr)
Administrative and management procedures needed to effectively manage the office, monitor finances, maintain supplies, perform quality improvement studies, and risk management profiles are taught. Bookkeeping and accounting principles, communication negotiation and psychological concepts are studied and practiced. Introduction to the student externship is given. Students spend four hours a week for eight weeks practicing skills learned in a medical office. Prerequisite: Successful completion of HIT 120, MA 122. (SCC)

MA 122 — Clinical Medical Assistant III: Phlebotomy and IV Therapy (5 cr)
This course offers advanced clinical skills for the medical assistant. Specialty exams and sterile procedures are emphasized. Students learn about collecting and processing laboratory specimens, and the proper use of microscopes. An overview of microbiology also is offered. Prerequisite: HED 108, 125, MA 111, 112. (SCC)

MA 125 — Ambulatory Care Setting Pharmacology (5 cr)
This course covers principles of pharmacology. Medication classifications will be studied according to body system and usage. Students will learn the different routes for medication administration, medication actions, contraindications and side effects. Prerequisite: Successful completion of MA 101, 102, 111, 112 and concurrent enrollment in HIT 120, MA 122. (SCC)

MA 131 — Practice Finances and Management (3 cr)
This course offers advanced administrative skills for the medical assistant. Topics include practice finances, accounting practices and the medical assistant in the roll of an office manager. Prerequisite: HED 109, MA 121, 122. (SCC)

MA 132 — Clinical Medical Assistant IV (5 cr)
This is the final course in preparation for clinical practice. The content is concentrated on injection and venipuncture techniques. Medication administration and dosage calculations are covered. Prerequisite: HED 109, MA 121, 122. (SCC)

MA 141 — Medical Assistant Seminar (1 cr)
Topics covered enhance students' abilities at the clinical site. They review important topics by applying the concepts required in the clinical area. Mock national certificate exams are offered. Prerequisite: HED 109, MA 121, 122, 131, 132 and concurrent enrollment in MA 142. (SCC)

MA 142 — Medical Assistant Externship (6 cr)
Students work under the supervision of facility personnel or the instructor in a physician's office. They utilize and apply the administrative and clinical skills learned in an actual ambulatory care setting. Prerequisite: HED 109, MA 121, 122, 131, 132 and concurrent enrollment in MA 141. (SCC)

MEDICAL OFFICE SPECIALIST

MSEC 108 — Medical Office Computing (5 cr)
Students receive hands-on training using financial, scheduling, word processing and clinical database software packages utilizing a microcomputer. Prerequisite: Keyboarding skills. (SCC)

MSEC 120 — Human Relations/Communications for Medical Office Personnel (5 cr)
Students learn the principles of therapeutic communications, human growth and development and their application to specific medical circumstances. (SCC)

MSEC 121 — Medical Office Reception (5 cr)
This course introduces students to the profession of the administrative medical assistant and how it fits within the health care environment and health care teams. Topics include legal and ethical concepts, telephone and scheduling techniques, medical records management rules and regulations, and how to create a comfortable facility atmosphere. Students enhance their ability to research using the Internet and library, create written reports and make round-table presentations. Prerequisite: BT 231. (SCC)

MSEC 123 — Medical Office Coding (5 cr)
This course introduces the identification of diagnoses and services by code. Transformation of verbal descriptions of diseases, injuries and procedures into numeric designations is presented using the Current Procedural Terminology (CPT) and the International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) coding books. Prerequisite: HED 105 or concurrent with HED 105. (SCC)

MSEC 124 — Medical Office Insurance Billing (5 cr)
This course introduces major, nationwide and local medical insurance programs. Students learn to simplify the process of filing claim forms and gain an understanding of medical insurance requirements for billing, confidentiality, coding, referrals and professional fees. Students also develop an "insurance information" notebook for future reference. Prerequisite: HED 104 and concurrent enrollment in MSEC 125. (SCC)

MSEC 125 — Medical Office Bookkeeping (5 cr)
This course introduces medical office billing procedures using medical management software. An interactive approach allows students to open new accounts, post typical business transactions, and open and close posting cycles. An overview of account aging, billing and collection procedures is included. Prerequisite: ACCT 151, BUS 103 and concurrent enrollment in MSEC 124. (SCC)

MSEC 131 — Fundamentals of Medical Word Processing (5 cr)
This course introduces the fundamentals of medical word processing including transcription of medical office correspondence and reports (medicolegal, history and physical, consultation, and discharge summaries). Students learn various mechanical formats used to prepare these reports. The application of medical terminology to develop familiarity with spoken terms is emphasized. Prerequisite: Typing speed of 50 wpm. (SCC)

MSEC 132 — Medical Transcription I (10 cr)
Students develop skills in transcription of medical dictation and word processing software using personal computers to transcribe selected medical correspondence and medical reports. A review of language skills including vocabulary, grammar and punctuation, capitalization, numbers, figures and abbreviations is presented. Transcription of reports (history and physical, operative, and discharge summaries) is emphasized. An academic study of related terminology also is included. Prerequisite: MSEC 190 or 131 with a 2.0 or better. (SCC)

MSEC 133 — Medical Transcription II (10 cr)
Students continue to develop the skills in the transcription of dictation utilizing proofreading and editing skills while meeting progressively demanding accuracy and productivity standards. Transcription of pathology, radiology, diagnostic testing and industrial medical reports is emphasized. An academic study of related terminology is included. Prerequisite: MSEC 146 or 132 with a 2.0 or better. (SCC)

MSEC 150 — Medical Transcription Practicum (8 cr)
Students must complete a minimum of 264 hours of on-the job medical transcription training. Consultations, histories and physicals, operative reports, discharge summaries, and other medical reports are emphasized. Prerequisite: MSEC 133. (SCC)

MSEC 223 — Medical Office Coding II (5 cr)
This course continues with the concepts introduced in MSEC 123. A more comprehensive study of the ICD-9-CM and CPT coding systems is presented. Prerequisite: MSEC 123. (SCC)

MSEC 224 — Chiropractic Anatomy (3 cr)
Students learn the anatomy and physiology of the central and peripheral nervous systems and how to identify aspects of the musculoskeletal system. Prerequisite: HED 105. (SCC)

MSEC 240 — Medical Office Transcription (5 cr)
Students learn to process, type and transcribe a variety of office reports and other dictation including chart notes, medical reference letters, medicology reports, consultation letters, interoffice correspondence, manuscripts and abstracts. Prerequisite: Typing speed of 40 wpm with 3 or fewer errors by exam. HED 105 or concurrent enrollment. (SCC)

MSEC 241 — Medical Office Transcription (5 cr)
This course continues with the applications introduced in MSEC 240 with an emphasis on transcription of special medical reports, referral letters and medical office dictation. Accuracy and speed in transcribing tapes are stressed. An academic study of related terminology is presented. Prerequisite: MSEC 240. (SCC)

MSEC 284 — Medical Internship Seminar (1 cr)
Students share office experiences, utilize problem-solving skills and participate in career-related activities. Prerequisite: Medical clerical careers students only and MSEC 121 or 133. If earning a medical secretary degree, this must be your final quarter. Concurrent enrollment in MSEC 287. (SCC)

MSEC 285 — Medical Office Reception Internship (2-3 cr)
Students are placed in Spokane area medical offices to observe and perform receptionist duties in the medical office environment. Prerequisite: Medical office specialist degree or currently enrolled in the final quarter of the medical office receptionist or medical office insurance clerk programs. Students must also have three "recommended-for-internship" SEA forms. (SCC)

MSEC 286 — Medical Insurance Billing Internship (2 cr)
Students observe and apply classroom skills in a Spokane area health care provider office environment for a minimum of 66 hours. Prerequisite: Medical office insurance clerk certificate students currently enrolled in their final quarter. Must have three "recommended-for-internship" SEA forms. (SCC)

MSEC 287 — Medical Specialist Internship (2 cr)
Students observe and apply classroom skills in a Spokane area health care provider office environment for a minimum of 66 hours. Prerequisite: Medical Office Specialist degree students. Must have three "recommended-for-internship" SEA forms. (SCC)

MSEC 289 — Chiropractic Internship (3 cr)
Students observe and apply classroom skills in a “real” health care provider office environment for a minimum of 99 hours. Prerequisite: MSEC 121, 124, 125 and concurrent enrollment in MSEC 284. (SCC)

MSEC 295 — Chiropractic Internship (6 cr)
Students work under the direction of a chiropractor to refine the skills developed in the classroom. Prerequisite: Concurrent enrollment in MSEC 284. (SCC)

MILITARY SCIENCE

MILSC 101 — Introduction to Leadership I (2 cr)
This course is a nontechnical introduction to military science. Students increase self-confidence through team study and activities in basic drill, physical fitness, rappelling, leadership reaction course, first aid, making presentations and basic marksmanship. They learn fundamentals of leadership in a profession in both classroom and outdoor laboratory environments intended to develop students and help them cope with life as a student and as a productive member of society. Highly encouraged, but optional, participation in a one weekend exercise and participation in one-hour sessions of physical fitness are offered. (SCC, SFCC)

MILSC 102 — Introduction to Leadership II (2 cr)
Students learn and apply principles of effective leading and team development. This course helps students reinforce self-confidence through participation in physically and mentally challenging exercises with upper-division ROTC students. It is intended to help students develop skills needed to increase their chances of success in the college environment. Students develop communication skills to improve individual performance and group interaction. They relate organizational ethical values to the effectiveness of a leader. Highly encouraged, but optional, participation in one-hour sessions of physical fitness are offered. (SCC, SFCC)

MILSC 103 — Introduction to Leadership III (2 cr)
Students build on and apply principles of effective leading and team development in the classroom and at the leadership laboratory. They continue to develop self-confidence through participation in physically and mentally challenging exercises with upper-division ROTC students. They develop skills to increase chances of success in a college environment, with special emphasis on communication skills, individual performance, social skills and group interaction. Highly encouraged, but optional, participation in one weekend exercise and participation of one-hour sessions of physical fitness are offered (SCC, SFCC)

MILSC 201 — Self/Team Development (3 cr)
Students learn and apply ethics-based leadership skills that develop individual abilities and contribute to the building of effective teams of people. They develop skills in oral presentations, writing concisely, planning for events, coordination of group efforts, advanced first aid, land navigation and basic military tactics. They learn fundamentals of ROTC's Leadership Development Program. Two hours of classroom instruction and a required two-hour leadership lab each week are offered. Highly encouraged, but optional, participation in one weekend exercise and participation in one-hour sessions of physical fitness also are offered. (SCC, SFCC)

MILSC 202 — Individual/Team Military Tactics (3 cr)
This course is an introduction to individual and team aspects of military tactics in small unit operations. Includes use of radio communications, making safety assessments, movement techniques, planning for team safety/security and methods of pre-execution checks. Practical exercises with upper-division ROTC students are provided. Students learn techniques for training others as an aspect of continued leadership development. Two hours of classroom instruction and a required two-hour leadership lab each week are offered. Highly encouraged, but optional, participation in one weekend exercise and participation in one-hour sessions of physical fitness also are offered. (SCC, SFCC)

MILSC 203 — Team Leadership/Military Tactics (3 cr)
An examination of the role of leadership and management in the context of a small organization element is provided with this course. Topics covered include motivation, handling disruptive influences, counseling skills, leadership styles and group dynamics. Students have an opportunity to identify their own strengths and weaknesses as leaders and managers. The course is presented in the context of military leadership, but the concepts can be applied in any context where leadership and management are essential. Highly encouraged, but optional, participation in one weekend exercise and participation in one-hour sessions of physical fitness are offered. (SCC, SFCC)

MUSIC

MUSC 100 — Music Fundamentals (3 cr)
Basics of music, including rhythm, melody and harmony, scales, keys, chords, and an introduction to the keyboard. (SFCC)

MUSC& 105 — Music Appreciation (5 cr)
Listening and understanding of common musical forms, idioms and styles; and how music relates to us today. (SCC, SFCC)

MUSC 106 — History of Popular Music (5 cr)
The development of popular American music from 1900 to the present. Pre-20th century influences and the development of jazz, blues, the swing era, rhythm and blues, rock and roll, country music, the British invasion, funk, electronic influences and fusion. (SCC, SFCC)

MUSC 108 — Music and Cinema (5 cr)
This course examines the various functions of music in film and traces the historical development of film music. (SCC, SFCC)

MUSC 109 — World Music (5 cr)
This course explores several musical cultures throughout the world, including but not limited to Africa, the Americas, Asia, Near East, Europe and South Pacific. The course is designed to enhance student's appreciation for the diversity of music throughout the world as well as the people that perform it. Students gain an understanding of features in the music that distinguish one style from another and the cultural and social-historical factors that shape the development of music. Lectures, films, recordings and live presentations assist students in their understanding of course topics. Though a knowledge of music is helpful, a music background is not required for this course. (SCC, SFCC)

MUSC 111 — Improvisation I (1 cr)
Improvisation I is open to any student who plays a musical instrument or sings and wants to acquire the basic improvisational skills for standard jazz repertoire. The class is a requirement for music students who want to perform in jazz combo and/or seeking an AFA degree Music with an emphasis in Jazz studies. The course runs concurrent with Jazz combos. Prerequisite: AUDIO 116 or MUSC 100 or MUSC& 141 and concurrent enrollment in MUSC 134. (SFCC)

MUSC 112 — Improvisation II (1 cr)
Improvisation II is open to any student who plays a musical instrument or sings and wants to acquire intermediate improvisational skills for standard jazz repertoire. The class is a requirement for music students who want to perform in jazz combo and/or seeking an AFA degree in music with an emphasis in Jazz studies. The course runs concurrent with Jazz combos. Prerequisite: MUSC 111 or permission of instructor and concurrent enrollment in MUSC 134. (SFCC)

MUSC 114 — Contemporary Harmony (3 cr)
This course includes the study of harmony as used in contemporary popular music, jazz, commercial media and film, including chords, scales, harmonic progressions, the blues, chord scale relationships, improvisation theory, notation and dictation. Students develop aural skills through listening and analysis. Prerequisite: AUDIO 116 or MUSC& 141, and MUSC 166 or 180 and concurrent enrollment in MUSC 167 or 180. (SFCC)

MUSC 115 — Symphony Orchestra (1-3 cr)
Students perform an extensive repertoire of quality orchestral music from the Baroque era to the present. Each course may be taken up to three times. (SFCC)

MUSC 124 — History of Jazz (5 cr)
A survey of jazz in which recent investigations in cultural anthropology and American history, as well as the traditional viewpoints of music history and theory, are reflected. (SCC, SFCC)

MUSC 127 — Chamber Singers (1-3 cr)
A select performing ensemble whose purpose is to study, practice and perform representative chamber music from the 16th through the 20th centuries. Each course may be taken up to three times. Prerequisite: Permission of instructor. (SFCC)

MUSC 134 — Jazz Combo (1 cr)
Jazz combos offer students an opportunity to play jazz in a small group format, concentrating on improvisation in many different styles. The combos perform regularly, including tours, jazz festivals and professional engagements. Each course may be taken up to three times. (SFCC)

MUSC 139 — All College Chorus (1-2 cr)
Elementary work in mixed chorus ensemble singing together with study of appropriate choral literature. Each course may be taken up to three times. (SFCC)

MUSC& 141 — Music Theory I (5 cr)
Students develop skills in writing and understanding correct musical notation, major and minor scales, and modes. Students write and apply intervals and triads to simple melodic and harmonic exercises. An emphasis is placed on the structural elements of music. (SFCC)

MUSC& 142 — Music Theory II (5 cr)
Students continue to study scales and modes and their application to melodic and harmonic composition. Students employ the use of triads and seventh chords, including all inversions, in four-part harmonic progressions, and continue to develop aural recognition of scales, intervals and triads with an emphasis on melodic dictation, rhythm, and ear training. Prerequisite: MUSC& 141. (SFCC)

MUSC& 143 — Music Theory III (5 cr)
This course focuses on modulation, secondary dominants and leading tone chords. Students are introduced to chromatic harmony, and analyze and write chorale-type compositions with an emphasis on the soprano/bass framework. Chordal analysis, including cadences and non-chordal tones, is emphasized. Aural recognition of scales, intervals and chords, with exercises in melodic dictation, rhythm, and ear training also are included. Prerequisite: MUSC& 142. (SFCC)

MUSC 144 — Commercial Music Groups (1 cr)
Students study and perform current popular music styles including rock, blues, fusion, top 40, country and standards. Each course may be taken up to three times. (SFCC)

MUSC 145 — Concert Band (1-3 cr)
Students perform an extensive repertoire of master works by composers from the Renaissance to the present. Each course may be taken up to three times. (SFCC)

MUSC 148 — Jazz Ensemble (1-3 cr)
Students study and perform modern trends and practices of jazz and related music areas. Individual music arrangements can be studied and created. Each course may be taken up to three times. (SFCC)

MUSC 151 — String Ensemble (1 cr)
This course is open to all students with reasonable proficiency on string instruments. Music performed surveys string repertoire for all combinations from masterworks of the baroque, classic, romantic and modern eras. Each course may be taken up to three times. (SFCC)

MUSC 166 — Functional Piano I (2 cr)
Students develop piano performance techniques relevant and practical for today's professional musician. Synchronized with MUSC 114, this course includes the study of scales, chords, voicings, harmonic progressions, chord/scale relationships and basic comping, and improvisational techniques. This course is essential for all students of jazz and commercial music, regardless of their primary instrument. (SFCC)

MUSC 167 — Functional Piano II (2 cr)
Students develop piano performance techniques relevant and practical for today's professional musician. This course includes the study of scales, chords, voicings, harmonic progressions, chord/scale relationships and basic comping, and improvisational techniques. This course is essential for all students of jazz and commercial music, regardless of their primary instrument. Prerequisite: MUSC 166 or permission of instructor. (SFCC)

MUSC 170 — Fundamentals of Singing (1 cr)
Students study the fundamentals of singing through participation, performance and observation in a class setting. (SFCC)

MUSC 171 — Advanced Fundamentals of Singing (2 cr)
Students continue to develop the technical skills of singing with an emphasis on the application of technique to repertoire. This course may be repeated up to three times, advancing in repertoire with the advice of the instructor. English, as well as other languages, will be included. Prerequisite: MUSC 170 or permission of instructor. (SFCC)

MUSC 176 — Beginner Piano Class I (2 cr)
This course provides a basic hands-on introduction to keyboard musicianship and proficiency within a group setting. Keyboard application skills include an introduction to music reading, rhythms, improvisations, technique, solo repertoire and group ensembles. This course is intended for the complete beginner or for students with little experience in piano. (SFCC)

MUSC 177 — Beginner Piano Class II (2 cr)
Students continue to develop keyboard musicianship and proficiency within a group setting. Keyboard application skills include an introduction to chord progressions, harmonization, transposition, and further development of sight-reading, two-handed rhythms, technique, solo repertoire and group ensembles. Prerequisite: MUSC 176 or permission of instructor. (SFCC)

MUSC 178 — Beginner Piano Class III (2 cr)
Students continue to develop keyboard musicianship and proficiency within a group setting. Keyboard application skills include an introduction to secondary chords, varied accompaniment patterns, and further development of sight-reading, two-handed rhythms, technique, solo repertoire and group ensembles. Prerequisite: MUSC 177 or permission of instructor. (SFCC)

MUSC 180 — Private Lessons (1 cr)
Private instrumental or voice lessons prepare students of music for transfer to a university, college or conservatory. Students develop technical agility, and learn and master literature they will be expected to perform as part of transfer auditions. Private lessons are reserved for students enrolled simultaneously in music theory, class piano and at least one performing ensemble. Music 180 may be taken up to six times. Prerequisite: Concurrent enrollment in music theory, class piano and at least one performing ensemble. (SFCC)

MUSC 182 — Guitar Class I (1 cr)
Students learn the fundamentals of note reading, basic theory and technical skills for both hands using a fingerstyle approach. Students are required to furnish their own instrument. (SFCC)

MUSC 210 — Improvisation III (1 cr)
Improvisation II is open to any student who plays a musical instrument or sings and wants to aquire advanced improvisational skills for standard jazz repetoire. The class is a requirement for music students who want to perform in jazz combo and/or seeking an AFA degree in Music with an emphasis in Jazz studies. The course runs concurrent with Jazz combos. Prerequisite: MUSC 112 or instructor permission and concurrent enrollment in MUSC 234. (SFCC)

MUSC 214 — Contemporary Harmony II/Songwriting (5 cr)
This is a study of major pop/rock, folk/country, and adult contemporary musical styles and the writers, producers, and artists who shape the music. Learn about many musical styles while striving to define your own. Develop instrumental and lyric songwriting techniques. Prerequisite: MUSC 114, 167 and concurrent enrollment in AUDIO 217, 218 and 213 or 255. (SFCC)

MUSC 215 — Symphony Orchestra (1-3 cr)
Students perform an extensive repertoire of quality orchestral music from the Baroque era to the present. Each course may be taken up to three times. Prerequisite: MUSC 115. (SFCC)

MUSC 227 — Chamber Singers (1-3 cr)
A select performing ensemble whose purpose is to study, practice and perform representative chamber music from the 16th through the 20th centuries. Each course may be taken up to three times. Prerequisite: Permission of instructor. (SFCC)

MUSC 234 — Jazz Combo (1 cr)
Jazz combos offer students an opportunity to play jazz in a small group format, concentrating on improvisation in many different styles. The combos perform regularly, including tours, jazz festivals and professional engagements. Each course may be taken up to three times. Prerequisite: MUSC 134 or permission of instructor. (SFCC)

MUSC 235 — History of Western Music I (4 cr)
Development of music in Western culture from classical antiquity through the Italian Renaissance. (SCC)

MUSC 236 — History of Western Music II (4 cr)
Development of music in Western culture from the advent of the Baroque style through late 18th century Viennese period. (SCC)

MUSC 237 — History of Western Music III (4 cr)
Development of music in Western culture from early 19th century romanticism to the present. (SCC)

MUSC 239 — All College Chorus (1-2 cr)
Elementary work in mixed chorus ensemble singing together with study of appropriate choral literature. Each course may be taken up to three times. (SFCC)

MUSC& 241 — Music Theory IV (5 cr)
This course focuses on practical writing and analytic experience in diatonic and chromatic harmony used during the 18th and 19th centuries. Students study musical forms, basics for arranging, orchestrating and composing, ear training and sight singing in solfege. Prerequisite: MUSC& 143 or permission of instructor. (SFCC)

MUSC& 242 — Music Theory V (5 cr)
Students continue to study music theory with further discussion on secondary functions, modulatory techniques, chromaticism, altered and borrowed chords, mode mixtures, augmented sixth chords and modulations, ear training and sight singing. Students compose the exposition of a piano sonata. Prerequisite: MUSC& 241. (SFCC)

MUSC& 243 — Music Theory VI (5 cr)
Students continue to study the harmonic vocabulary and elements in late romanticism and the 20th century, impressionism, scales, parallelism, pandiatonicism, set theory, 12-tone technique, serialism, electronic music, advanced sight singing and ear training. Prerequisite: MUSC& 242. (SFCC)

MUSC 244 — Commercial Music Groups (1 cr)
Students study and perform current popular music styles including rock, blues, fusion, top 40, country and standards. Each course may be taken up to three times. Prerequisite: MUSC 144 or permission of instructor. (SFCC)

MUSC 245 — Concert Band (1-3 cr)
Students perform an extensive repertoire of master works by composers from the Renaissance to the present. Each course may be taken up to three times. Prerequisite: MUSC 145. (SFCC)

MUSC 248 — Jazz Ensemble (1-3 cr)
Students study and perform modern trends and practices of jazz and related music areas. Individual music arrangements can be studied and created. Each course may be taken up to three times. Prerequisite: MUSC 148. (SFCC)

MUSC 251 — String Ensemble (1 cr)
This course is open to all students with reasonable proficiency on string instruments. Music performed surveys string repertoire for all combinations from masterworks of the baroque, classic, romantic and modern eras. Each course may be taken up to three times. (SFCC)

MUSC 276 — Advanced Piano Class I (2 cr)
Students learn advanced keyboard musicianship and proficiency within a group setting. Keyboard application skills include an introduction to basic conducting and further development of keyboard technique, harmonization, transposition, improvisation, sight-reading, solo repertoire, and group ensembles. Prerequisite: MUSC 178 or permission of instructor. (SFCC)

MUSC 277 — Advanced Piano Class II (2 cr)
Students continue to develop advanced keyboard musicianship and proficiency within a group setting. Keyboard application skills include an introduction to varied chord progressions using secondary chords and inversions. The course includes group discussions on performance anxiety and related issues, and further development of keyboard technique, harmonization, transposition, improvisation, sight-reading, solo repertoire and group ensembles. Prerequisite: MUSC 276. (SFCC)

MUSC 278 — Advanced Piano Class III (2 cr)
Students continue to develop advanced keyboard musicianship and proficiency within a group setting. Keyboard application skills include an introduction to chorale score reading, accompaniment and further development of keyboard technique, harmonization, transposition, improvisation, sight-reading, solo repertoire and group ensembles. Prerequisite: MUSC 277. (SFCC)

MUSC 280 — Private Lessons (1 cr)
Private instrumental or voice lessons prepare students of music for transfer to a university, college or conservatory. Students develop technical agility and learn and master literature they will be expected to perform as part of transfer auditions. Private lessons are reserved for students enrolled simultaneously in music theory, class piano and at least one performing ensemble. Music 280 may be taken up to six times. Prerequisite: Concurrent enrollment in music theory, class piano and at least one performing ensemble. (SFCC)

NATURAL RESOURCE MANAGEMENT

NATRS 112 — Natural Resources Mathematical Applications (5 cr)
Students learn basic arithmetic and algebra skills necessary for application in the fields of natural and water resources. (SCC)

NATRS 120 — Basic Computer Applications in Natural Resources (2 cr)
This is a beginning course in the use of computers in natural resource management. Use of specific software in a setting similar to on-the-job computer use in natural resource management such as word processing, presentation and the Internet is emphasized. (SCC)

NATRS 122 — Natural Resources Trigonometric Applications (5 cr)
Students learn the fundamentals of graphing, statistics, geometry and trigonometry with emphasis on practical applications to the fields of natural and water resources. Prerequisite: NATRS 112 with a grade of 1.7 or higher or equivalent. (SCC)

NATRS 130 — Chainsaw Operation, Maintenance and Safety (3 cr)
Students learn the proper operation, care, maintenance and safety in the use of chainsaws. Practical applications and demonstrations are emphasized. (SCC)

NATRS 131, 132, 133 — Field Projects in Natural Resources (3 cr ea)
This course provides practical experience that allows students to gain additional knowledge in a special topic of interest in natural resources management. Guidance from the natural resources instructors is provided to help students maximize their projects. Prerequisite: Permission of instructor; must be a natural resources major. (SCC)

NATRS 201 — Forest Protection (5 cr)
Students learn basic principles of fire control and behavior, and the control and identification of insect and disease damage to forest trees. (SCC)

NATRS 202 — Dendrology (5 cr)
This class combines lecture, lab, field trips and a variety of laboratory plant identification exercises. The majority of the class is held at Mt. Spokane State Park and the Newman Lake area describing and identifying forest plants. (SCC)

NATRS 203 — Forest Harvesting and Products (5 cr)
This course provides an overview of the wood products industry from the harvesting of raw material through its processing into a product. Students realize the connection between product specifications and their impact on harvesting equipment and techniques. Safety procedures when working around harvesting and processing equipment are practiced and stressed. Prerequisite: NATRS 204, 205 or permission of instructor. (SCC)

NATRS 204 — Maps and Aerial Photo Interpretation (5 cr)
Students learn the basic principles of interpretation and field use of aerial photographs relating to natural resources. Field use of planimetric and topographic maps is emphasized. Prerequisite: NATRS 112 or permission of instructor. (SCC)

NATRS 205 — Surveying (5 cr)
Students learn elementary surveying, including fundamentals of forest surveying, and use and care of equipment. Emphasis is on use of staff compass, Abney level, clinometer, tapes, transit and stadia rod. Prerequisite: NATRS 122 or permission of instructor. (SCC)

NATRS 209 — Silviculture (5 cr)
Students learn basic principles of timber stand improvement, cutting practices and forest regeneration methods. Prerequisite: ENVS 110, NATRS 112, 209, 215 or permission of instructor. (SCC)

NATRS 215 — Forest Measurements (5 cr)
Students learn basic principles of forest and natural resources sampling and measurement. Field work emphasizes correct use of forest measurements tools and instruments. Class work emphasizes calculations using measurements taken in the field. Prerequisite: NATRS 112 or permission of instructor. (SCC)

NATRS 216 — Forest Inventory (5 cr)
This course furthers the principles of forest measurements with emphasis on cruising, forest inventory, volume calculations and forest-type mapping. Prerequisite: NATRS 112 or permission of instructor. (SCC)

NATRS 217 — Freshwater Fisheries Biology (5 cr)
Students learn to identify fish and study biology, ecology, habitat requirements and management, hatchery propagation, stream enhancement and restoration procedures, and selected aquatic insect and riparian plant identification. (SCC)

NATRS 220 — Introduction to Geographic Information Systems for Natural Resources (4 cr)
Students learn the basics of the ArcGIS suite of products and integrate spreadsheets and databases into geographic information systems (GIS) to analyze common problems in natural resources. Prerequisite: NATRS 120 or permission of instructor. (SCC)

NATRS 221 — Applications in Geographic Information Systems (5 cr)
This course builds on the basic geographic information systems (GIS) skills developed in NATRS 220 using ArcGIS software and extensions for GIS applications in natural resources management. Cartographic concepts are introduced. Prerequisite: NATRS 220 or permission of instructor. (SCC)

NATRS 225 — Natural Resources Occupational Experience (1-12 cr)
This practical course assists students in pursuing careers in natural resources. Students learn to complete specific employment applications, resumes and letters of inquiry, and employment portfolios. Students also contact employers for interviews and follow-up. Students are required to evaluate their work experience and submit comprehensive written and oral reports. Prerequisite: Natural resources students only or permission of instructor and concurrent enrollment in the natural resources program. (SCC)

NATRS 230 — Global Positioning Systems (3 cr)
This course teaches students to use global positioning systems to collect, prepare, and map static and kinematic data. Using GPS to find points in the field is practiced as well. Prerequisite: NATRS 120, 204, 122 or permission of instructor. (SCC)

NATRS 231, 232, 233 — Field Projects in Natural Resources (3 cr ea)
This course provides practical experience that allows students to gain additional knowledge in a special topic of interest in natural resources management. Guidance from the natural resources instructors is provided to help students maximize their projects. Prerequisite: Permission of instructor; must be a natural resources major. (SCC)

NONINVASIVE CARDIOVASCULAR TECHNOLOGY

NCT 113 — Electrophysiology (4 cr)
Students are introduced to the field of cardiovascular technology, basic cardiac anatomy, physiology and electrophysiology with emphasis on the performance and interpretation of the electrocardiogram. Laboratory experiences to support these concepts also are included. Prerequisite: Enrollment in ICT program or permission of instructor. (SCC)

NCT 116 — Acute Coronary Syndrome (1 cr)
A study of the nations number one killer in its acute phase. Pathophysiology of atherosclerosis. The stable versus the unstable patient. Vulnerable plaque types. STEMI versus NSTEMI patient presentations. The national door to balloon initiative. 12 lead EKG recognition of the signs of ischemia/infarct patterns. Prerequisite: Enrollment in ICT program or permission of instructor. (SCC)

NCT 117 — Cardiovascular Pharm 1 (1 cr)
Introduction to cardiovascular pharmacology. A review of control of heart rate, blood pressure, and cardiac output and the common drug groups employed to manipulate these parameters. Prerequisite: Enrollment in ICT program or permission of instructor. (SCC)

NCT 123 — History and Physical (3 cr)
This course introduces the concepts essential to the interpretation of the cardiovascular history and physical examination. The history and physical findings are related to the basic cardiac diseases (coronary artery disease, heart valve abnormalities and ventricular function). The role of the history and physical examination are explored in the performance and interpretation of the exercise tolerance test. Prerequisite: Enrollment in one of the cardiovascular programs or respiratory care and concurrent enrollment in ICT 124. (SCC)

NCT 125 — Hemodynamics (2 cr)
Introduction to various forms of invasive monitoring. Emphasis is placed on the basics of hemodynamic monitoring and interpretation. Normal and pathologic examples are introduced. Prerequisite: Enrollment in ICT program or permission of instructor. (SCC)

NCT 126 — Technical Skills/Reading Hemodynamics (1 cr)
Introduction to various forms of invasive monitoring. Emphasis is placed on the basics of hemodynamic monitoring and interpretation. Normal and pathologic examples are introduced. Supports concepts taught in ICT 125. Prerequisite: Permission of instructor. (SCC)

NCT 127 — Cardiovascular Pharm 2 (1 cr)
Continuation of ICT 117 Intro to CV Pharm. Advanced Cardiac Life Support drugs are introduced. Pharmacy math is introduced. Pharmacy law is studied. Principles of IV therapy are introduced. Prerequisite: Enrollment in ICT program or permission of instructor. (SCC)

NCT 128 — Technical Skills/Pharmacology (1 cr)
Supports ICT 127 concepts. Case studies of patients during cardiac emergencies will be evaluated for appropriate drug selection. Pharmacy math calculations will be taught. IV therapy techniques will be taught. Prerequisite: Enrollment in ICT program or permission of instructor. (SCC)

NCT 133 — ECHO Fundamentals (5 cr)
Introduction to the basic principles and application of the Doppler and echocardiographic procedures. The anatomy, image assessment, hemodynamics and clinical applications of cardiac ultrasound are emphasized. Laboratory experiences are provided. Prerequisite: Admission to program. (SCC)

NCT 139 — Surgical Asepsis (1 cr)
Surgical asepsis for health care providers. This class will prepare the student to create a sterile field. Gown and glove themselves and others. Procedural awareness of working in a sterile field will be developed. Prerequisite: Enrollment in ICT program or permission of instructor. (SCC)

NCT 140 — Technical Skills/Surgical Asepsis (1 cr)
This class supports ICT 140. The skills of surgical asepsis and infection control are taught. Working in a sterile field and gowning and gloving are taught. Develop a surgical conscience. Prerequisite: Enrollment in ICT program or permission of instructor. (SCC)

NCT 141 — Computers for the CV Technologist (3 cr)
Students explore applications in medicine and develop the ability to use the microprocessor for word processing database management and statistical analysis. Principles of statistics are reviewed and applied through database management. Prerequisite: Concurrent enrollment in NCT 143. (SCC)

NCT 142 — Noninvasive Cardiovascular Clinical (4 cr)
Students develop basic imaging skills by imaging normals within the SCC echocardiography laboratory. Clinical requirements are discussed and defined. The role and job description of the noninvasive cardiovascular technologist are evaluated. Prerequisite: Concurrent enrollment in NCT 143. (SCC)

NCT 143 — Noninvasive Cardiovascular Clinical Observation (6 cr)
Students spend four weeks in a clinical setting. Two weeks are spent in an echocardiography laboratory assisting staff in patient preparation; imaging time is provided when appropriate. Two weeks are spent in a noninvasive electrophysiology laboratory performing ECGs, exercise tolerance testing, Holter monitoring and pacemaker checks under the direction of a staff technologist. Weekly clinical seminars are conducted with SCC staff. A clinical consciousness is developed with emphasis on professionalism, clinical rapport, medical ethics and patient care. Prerequisite: Completion of NCT 133 or permission of instructor. (SCC)

NCT 251 — Echocardiography Clinical I (4 cr)
Students obtain hands-on experience in hospital and clinical environments. Development of clinical technique in the utilization of current echocardiographic instrumentation in the evaluation of acquired cardiovascular disease is emphasized. Students apply the principles of medical legal ethics and professionalism to the patient, physician and other members of the health team. Clinical case reports are required. Prerequisite: Concurrent enrollment in NCT 253. (SCC)

NCT 253 — Echocardiography I (1-11 cr)
Students utilize the fundamentals presented in the first year of noninvasive cardiovascular technology to evaluate acquired cardiovascular disease states. This course incorporates all forms of noninvasive cardiovascular testing with emphasis on the performance and interpretation of M-mode, two-dimensional and Doppler echocardiography. Related physician lectures, clinical and laboratory experiences are presented. Prerequisite: Enrollment in ICT program or permission of instructor. (SCC)

NCT 261 — Echocardiography Clinical II (4 cr)
Students utilize the skills learned in NCT 251 and obtain advanced experience in hospital and clinical environments. Development of clinical technique in the utilization of current echocardiographic instrumentation in the evaluation of acquired cardiovascular disease is emphasized. Students apply the principles of medical legal ethics and professionalism to the patient, physician and other members of the health team. Clinical case reports are required. Prerequisite: Concurrent enrollment in NCT 263. (SCC)

NCT 263 — Echocardiography II (11 cr)
Students utilize the fundamentals presented in the first year of noninvasive cardiovascular technology to evaluate congenital heart disease. This course continues with the study of cardiac noninvasive diagnostics with emphasis on specialty applications and new developments. Statistics, research and quality control methods are utilized. Related physician lectures, clinical and laboratory experiences are presented. Prerequisite: NCT 253. (SCC)

NCT 273 — Echocardiography Clinical III (13 cr)
Students practice clinical skills previously developed through active participation in a noninvasive cardiovascular laboratory. This full-time clinical internship is completed in an affiliated local or out-of-town hospital. Clinical skills necessary to the performance and evaluation of the M-mode, two-dimensional and Doppler Echocardiogram are emphasized. Written reports, review of current literature and attendance at conferences are required. Prerequisite: NCT 263. (SCC)

NCT 299 — Independent Studies in Noninvasive Cardiovascular Technology (1-13 cr)
This course is designed for students wishing to complete specialized studies in the field of noninvasive cardiovascular technology. Objectives are developed jointly by the student and instructor. Credit hours are assigned according to the length of time required to complete the objectives. Credits are agreed upon at the time of enrollment. Students complete specialized clinical internships in pediatric echocardiography, color flow mapping or vascular technology. Prerequisite: Current enrollment or graduate of NCT, or permission of instructor. (SCC)

NURSING PROGRAM (R.N., L.P.N.)

NURS 107 — Women and Health (1-2 cr)
This course is an elective course that is open to all CCS students that introduces contemporary women's health care issues. This course is taught completely online and a variety of topics will be covered through online videos that are watched on the student's own and then discussed via the discussion board on ANGEL. (SCC)

NURS 116 — Nursing Foundations (9 cr)
This course introduces students to the foundations of nursing across the lifespan but emphasizing the older adult. The students will be introduced to the nursing process as a clinical-decision making tool, basic hygiene and safety promotion, legal and ethical considerations of nursing practice, and basic skill development for assisting with activities of daily living, performing physical assessment, administering medication, documentation. Students will apply this information to care of older adults in long-term care facilities and be assigned one resident each week. The clinical experience will be enhanced with the introduction to clinical simulation. Prerequisite: Acceptance into the Nursing program. (SCC)

NURS 121 — Cultural Diversity in Health Care (1 cr)
This course provides a foundation for applications of cultural concepts in the health care setting. Individual cultures are explored emphasizing cultural sensitivity within the health care setting. Self awareness and evaluation are accentuated as a critical component of cultural competence. Prerequisite: Acceptance into the Nursing program. (SCC)

NURS 125 — Introduction to Medical Surgical Nursing Across the Lifespan (8 cr)
This course introduces students to care of common, stable acute or chronic illnesses across the lifespan that affect various systems of the body. The student will apply growth and development principles to explain care adaptations and health promotion for children in a well-child setting. Application of these concepts in the clinical setting will be provided for in a variety of settings including clinical simulation. Students will be assigned to care for at least one patient. Prerequisite: NURS 116, 121, 125 with a grade of 2.0 or higher. (SCC)

NURS 126 — Pharmacology For Nurses (2 cr)
This course introduces the student to the fundamentals of pharmacology, including drug legislation, pharmacokinetics, pharmacodynamics, pharmacotherapeutics, contraindications, and precautions for prototype drugs for multiple body systems. The student will also be introduced to different schedules of drugs according to the Drug Enforcement Agency as well as various classes utilized for adult care, pediatrics, pregnancy, and lactation. Major emphasis will be placed on nursing management practices that minimize adverse effects and maximize therapeutic effects for patients. Prerequisite: NURS 116, 121 with a grade of 2.0 or higher. (SCC)

NURS 131 — Intravenous Therapy Concepts (1.5 cr)
This course introduces the basic concepts of fluid and electrolyte therapy. Theory and practice in a laboratory setting related to initiating, maintaining, monitoring, discontinuing, and documenting intravenous therapy is also included. Various types of catheters and devices by which intravenous fluid therapy is delivered and monitored will be studied. In addition, national guidelines and standards for infection control as they apply to intravenous therapy will be presented. Mathematical formulas used in administering intravenous therapy will be presented to ensure safe patient care. Prerequisite: NURS 116, 121, 125, 126 with a grade of 2.0 or higher. (SCC)

NURS 135 — Maternal Newborn Nursing (5 cr)
This course provides students with the foundational knowledge to provide care for childbearing women and their families though all stages from preconception, pregnancy and the first four to six weeks following childbirth. The normal aspects of maternal and perinatal health with common risks and complications will be addressed. Application of these concepts in the clinical setting will be provided for in maternity/newborn acute care setting. This course is the foundation for the study of abnormal and advanced obstetrical/neonatal principles covered in Nursing 225. Prerequisite: NURS 116, 121, 126 with a grade of 2.0 or higher. (SCC)

NURS 136 — Mental Health Nursing (5 cr)
This course will enable the student to adapt concepts of mental health to the promotion, maintenance and restoration of health for patients, and their significant support systems across the lifespan. Using the dynamic interaction between the nurse and patient, concepts of communication, personality, feelings, behavior, self-awareness, group process and the process of interpersonal relationships will be utilized. Application of foundational mental health concepts will be provided in clinical sites in the acute care setting and in the state hospital clinical site. Prerequisite: NURS 116, 121, 125, 126 with a grade of 2.0 or higher. (SCC)

NURS 141 — Professional/Vocational Relationships (1 cr)
This course is designed to prepare the student for entrance into the employment setting as a licensed practitioner and to appreciate the role of the LPN in the health care team. Emphasis will be placed on ethical concepts, current practice issues, and legal aspects of the profession. This is a foundation for the RN leadership management course in the second year. Prerequisite: NURS 116, 121, 125, 126, 131, 135, 136 with a grade of 2.0 or higher. (SCC)

NURS 145 — Medical Surgical Nursing Across the Lifespan (12 cr)
This course focuses on prioritizing patient-centered care for children and adults with common acute and chronic health problems within more complex body systems, building on concepts introduced in Nursing 116 and Nursing 125. Students will use their knowledge of growth and development concepts to adapt care to a sick child. Clinical experiences with 1-2 patients each week coupled with simulation laboratory experiences will assist students in continued development of evidence-based clinical-decision-making skills and judgment to maintain patient safety and promote optimal patient outcomes. Prerequisite: NURS 116, 121, 125, 126, 131, 135, 136 with a grade of 2.0 or higher. (SCC)

NURS 214 — Advanced Pharmacology For Nurses (2 cr)
This course is designed to build on prior pharmacological study of actions and effects of drugs on the human system across the life span. Students will study pharmacologic mechanisms of action, effects on organ systems, routes of administration, pharmarcokinetics, therapeutic uses, considerations related to age and physiologic state, adverse reactions, contraindications, and drug interactions. Case studies will be used to aid students in the transition from course work to clinical practice. This course will also highlight the impact of clinical trail outcomes, evidence based practice, and new drug evolution. Emphasis is placed on the decision making process utilized to safely and effectively monitor pharmacokinetic principles and clinical applications of therapeutic drugs used by practitioners in the primary acute health care settings. The course will include advanced pharmacology concepts organized by drug groups and prototypes. Content will include drug actions and toxicities of traditional, new, and botanical preparations. Drugs of choice and treatment strategies for all major diseases will be addressed. Prerequisite: NURS 116, 121, 125, 126, 131, 135, 136, 141, 145 with a grade of 2.0 or higher. (SCC)

NURS 215 — Advanced Medical Surgical Nursing Across the Lifespan I (10 cr)
This course focuses on the medical-surgical management of patients with common acute and chronic pathological processes across the lifespan. This course builds on the first year courses with the teaching methodology concentrated in the use of current evidence to provide optimal patient outcomes. Application of these concepts in will continue in both the simulation laboratory and the clinical setting where students will care for 1-2 patients with acute and chronic health problems. Prerequisite: NURS 116, 121, 126, 131, 135, 136, 141, 145 with a grade of 2.0 or higher. (SCC)

NURS 216 — Health Care in the Community (2-3 cr)
This course is designed to enable the student to provide services to the community in the health related field. The student will learn the value of contributing to the community by volunteering with community service agencies and with the Spokane Regional Health Department. Prerequisite: NURS 116, 121, 125, 126, 131, 135, 136, 141, 145 with a grade of 2.0 or higher and concurrent enrollment in NURS 215, 225 or 235. (SCC)

NURS 225 — Advanced Medical Surgical Nursing Across the Lifespan II (10 cr)
This course focuses on the collaborative management of patients with acute and chronic pathological processes throughout the lifespan and builds on Advanced Care Concepts I. The student will utilize informational technology to collect and synthesize data when making safe and optimal clinical judgments. Clinical experiences in acute care settings with 2-3 patients each week coupled with clinical simulation allows the student to apply these concepts. Prerequisite: NURS 116, 121, 125, 126, 131, 135, 136, 141, 145, 215 with a grade of 2.0 or higher. (SCC)

NURS 226 — Health Care Management (2 cr)
This course discusses the principles of nursing leadership and examines trends and challenges in nursing. It provides an opportunity for the student nurse to explore the transition from student to Licensed Practical Nurse to Registered Nurse. The practice of nursing will be discussed as it is impacted by: legal constraints; management and collaboration of care; delegation; advanced communication techniques, leadership styles; professionalism; clinical decision making and evidenced base nursing. Prerequisite: NURS 116, 121, 125, 126, 131, 135, 136, 141, 145, 215 with a grade of 2.0 or higher. (SCC)

NURS 231 — Advanced Intravenous Therapy Concepts (2 cr)
This course is an elective which introduces advanced concepts of infusion therapy and builds on the concepts of intravenous therapy that were introduced in Nursing 131. Theory related to intravascular site selection and access with an emphasis on central lines, maintenance of various vascular access devices, administration of blood/blood products, administration of antineoplastic agents, intravenous pain management and electronic infusion devices will be discussed. Special considerations related to infusion therapy in pediatric and gerontological patients will be addressed. Prerequisite: NURS 116, 121, 125, 131, 135, 136, 141, 145 with a grade of 2.0 or higher. (SCC)

NURS 235 — Advanced Medical Surgical Nursing Across the Lifespan III (11 cr)
This course focuses on nursing management of patients with complex, multi-system acute and chronic pathological processes throughout the lifespan. Students utilize informational technology to collect and synthesize current evidence to make safe and optimal clinical judgments. Students collaborate with the health care team to provide compassionate care and facilitate optimal patient and organizational outcomes. Clinical experiences in an acute care setting with 2-3 patients each week coupled with clinical simulation allow the student to apply these concepts. The course includes a senior capstone experience where students apply leadership and management of care skills. During this experience, the student will work with a preceptor in either an acute, long term care or community health setting. Prerequisite: NURS 116, 121, 125, 126, 131, 135, 136, 141, 145, 215, 225, 226 with a grade of 2.0 or higher. (SCC)

NUTRITION

NUTRI 150 — General Nutrition (3 cr)
Fundamental concepts, theories and terminology of nutrition, including all classes of essential nutrients with respect to properties, functions, deficiencies, toxicities, dietary requirements and major food sources are covered in this class. Current controversial applied nutrition topics are included in many subject areas. (SCC, SFCC)

NUTRI 251 — Nutrition (5 cr)
The science that studies food and its relation to human health and performance. The various nutrients and their functions in human metabolism are examined. Essential nutrients are studied with respect to properties, functions, deficiencies, toxicities, dietary requirements and major food sources. Prerequisite: BIOL& 160 and CHEM& 122 or permission of instructor. (SCC, SFCC)

OCCUPATIONAL THERAPY ASSISTANT

OTA 101 — Foundation of Occupational Therapy (3 cr)
An overview of founding principles of occupational therapy practice. History of the profession, develop a framework of occupational therapy and standards of the profession. Course provides in-depth exploration of occupation, life roles through the life cycle, occupational therapy theory, analysis, and synthesis of occupations as performed in the various life stages. Prerequisite: Acceptance into the program. (SFCC)

OTA 102 — Occupational Therapy Terminology (1 cr)
Supervised self-study of terminology and abbreviations used to describe the anatomy, physiology, and pathology of the body systems used in relationship to the practice of physical and occupational therapy. Terms associated with diagnostics, surgery, laboratory tests, pharmacology, and patient care will be included. Prerequisite: Acceptance into the OTA program. (SFCC)

OTA 103 — Applied Anatomy (1 cr)
Course offering includes instruction in human anatomy with an emphasis on the musculoskeletal system, external palpation and identification of structures and relationship to function. Introduction to kinesiology. Prerequisite: Grade of 2.0 in previous OTA courses or permission of instructor. (SFCC)

OTA 104 — Survey of Pathophysiology (5 cr)
Basic overview of disease processes including general pathological responses and the physiology of healing and repair. Description of specific diseases and conditions and the medical and surgical forms of treatment as they relate to rehabilitation. Prerequisite: Grade of 2.0 or better in OTA courses or permission of instructor. (SFCC)

OTA 105 — Introduction to Neuroscience (4 cr)
Introduction to the structures and basic functions of the nervous system in relationship to occupational therapy treatment of patients with neurological lesions and disease processes. Prerequisite: Grade of 2.0 or better in previous OTA courses or permission of instructor. (SFCC)

OTA 106 — Regional Human Anatomy and Physiology (5 cr)
Study of human body structure and function with emphasis on muscles, and circulatory, respiratory, endocrine, and nervous systems. This course is specially designed to meet the needs of students becoming an OTA. Prerequisite: Grade of 2.0 or better in previous OTA courses or permission of instructor. (SFCC)

OTA 107 — Human Development Through the Lifespan (2 cr)
A survey of human development focusing on the physical, cognitive, psychological and emotional/social processes from infancy through older adulthood. Topics include the history and principles of developmental psychology, typical and atypical development and how to apply concepts of development in settings including hospitals, assisted living, childhood education, and out-patient settings. Prerequisite: 2.0 or better in previous OTA courses or permission of instructor. (SFCC)

OTA 110 — OTA Procedures (1 cr)
This course is designed to give occupational therapy assistant students basic knowledge in patient care, clinical procedures, managing infections, transfer, client handling techniques, assistive mobility equipment in preparation for the patient care and treatment environment. Prerequisite: Acceptance into the OTA program. (SFCC)

OTA 111 — Activity Analysis (3 cr)
Class provides opportunities to develop a foundation of knowledge and skills for the evaluation of occupational performance through activity analysis. Prerequisite: Grade of 2.0 or better in previous OTA courses or permission of instructor. (SFCC)

OTA 112 — Occupational Performance and Physical Disabilities (3 cr)
Course explores the role of the occupational therapy assistant in physical disabilities settings. Instruction in occupational performance, restoration techniques for daily living skills, use of assistive devices, and selected occupational performance activities. Prerequisite: Grade of 2.0 in previous OTA courses or permission of instructor. (SFCC)

OTA 113 — Occupational Therapy Principles (3 cr)
Course applies occupational therapy principles, frames of reference, and theories integrating Occupational Therapy Practice Framework with occupational performance. Student will gain knowledge and skills for the analysis of occupations and activity synthesis adapting, and grading of occupational therapy interventions in a variety of settings with persons who are experiencing dysfunction in occupational performance. Prerequisite: 2.0 or better in previous OTA courses or permission of instructor. (SFCC)

OTA 114 — Therapeutic Activities (3 cr)
This course provides occupational therapy assistant students basic knowledge of assessments used in therapeutic environments, introduction to emerging practice areas and activity modification for infant through older populations. Prerequisite: Acceptance into the OTA program. (SFCC)

OTA 120 — OTA Procedures Lab (2 cr)
This course provides occupational therapy assistant students basic knowledge and skills in patient care, clinical procedures, managing infections, transfer, client handling techniques, assistive mobility equipment, and basic physical modalities in preparation for the patient care and treatment environment. Prerequisite: Acceptance into the OTA program. (SFCC)

OTA 122 — Occupational Performance and Physical Disabilities Lab (2 cr)
Course explores through functional application, the role of the occupational therapy assistant in physical disabilities settings. Instruction in occupational performance, restoration techniques for daily living skills, use of assistive devices, and selected occupational performance activities. Prerequisite: Grade of 2.0 in previous OTA courses or permission of instructor. (SFCC)

OTA 123 — Applied Anatomy Lab (2 cr)
Course provides functional application and practice in human anatomy with an emphasis on the musculoskeletal system, external palpation, manual muscle testing, range of motion testing and identification of structures and relationship to function. Introduction to kinesiology. Prerequisite: Grade of 2.0 in previous OTA courses of permission of instructor. (SFCC)

OTA 124 — Therapeutic Activities Lab (2 cr)
This course provides occupational therapy assistant students basic knowledge and hands-on skills in assessment administration, emerging practice areas and activity modification/fabrication across the lifespan. Prerequisite: Acceptance into the OTA program. (SFCC)

OTA 127 — Human Development Through the Lifespan Lab (1 cr)
A human development lab with practical hands-on experiences focusing on the physical, cognitive, psychological and emotional processes from infancy through older adulthood. Topics include test administration, developmental treatment planning, and note writing in developmental terminology, typical and atypical development in settings to include hospitals, assisted living, and childhood education and out patients. Prerequisite: 2.0 or better in previous OTA courses or permission of instructor. (SFCC)

OTA 151 — Level I Clinical Fieldwork I (1 cr)
Introduction to the role of working with adults with physical disabilities within a community-based clinical setting. Prerequisite: Grade of 2.0 or better in previous OTA courses or permission of instructor and concurrent enrollment in OTA 161. (SFCC)

OTA 161 — Level I Clinical Fieldwork I Seminar (1 cr)
Seminar course taken in conjunction with OTA 151 Clinical Fieldwork I. Seminar course focuses on professional behaviors, clinical expectations, therapeutic relationships, professional relationships, documentation of clinical experience, health care policies and procedures and safety practices as taking place within community clinic setting. Prerequisite: Grade of 2.0 or better in previous OTA courses or permission of instructor and concurrent enrollment in OTA 151. (SFCC)

OTA 201 — Issues in Occupational Therapy and Health Care (2 cr)
Survey of medical, legal, and psychosocial and relational issues relating to the role of the Occupational Therapy Assistant and Physical Therapist Assistant in the delivery of health care services. Prerequisite: 2.0 or better in previous OTA courses or permission of instructor. (SFCC)

OTA 202 — Group Dynamics (2 cr)
Course provides instruction for effective interpersonal communication in clinical settings. Emphasis is placed on basic listening skills, providing meaningful feedback, and cultivating group skills. This course utilizes both peer feedback and engagement of therapeutic use of self. Prerequisite: 2.0 or higher in previous OTA courses or permission of instructor. (SFCC)

OTA 210 — Occupational Performance and Mental Health (3 cr)
Course addresses acute and chronic psychosocial dysfunction conditions and occupational therapy's role in providing service. Topics include OTA's role in interventions, theory, evaluation, and treatment planning. Prerequisite: 2.0 or better in previous OTA courses or permission of instructor. (SFCC)

OTA 212 — Occupational Performance and Children (3 cr)
Course examines child development and occupational therapy practice for individuals from birth through age 21, with a focus on physical and developmental disabilities, neurological dysfunctions and sensory processing concerns. Includes theory, assessment, treatment plan and intervention for this population. Prerequisite: 2.0 or better in previous OTA courses or permission of instructor. (SFCC)

OTA 220 — Occupational Performance and Mental Health Lab (2 cr)
Course addresses acute and chronic psychosocial dysfunction conditions and occupational therapy's role in providing service. Topics include OTA's role in interventions, theory, evaluation, and treatment planning. Prerequisite: 2.0 or better in previous OTA courses or permission of instructor. (SFCC)

OTA 221 — Occupational Performance and Aging (3 cr)
Exploration of therapeutic approaches with aging population and individuals with chronic disabling conditions. Occupational Therapy Practice Framework as well as productive activities, daily living skills, social participation, medication management, use of orthotic devices and adaptive equipment, work, and leisure are explored. Prerequisite: 2.0 or better in previous OTA courses or permission of instructor. (SFCC)

OTA 231 — Occupational Performance and Aging Lab (2 cr)
Hands on exploration of therapeutic approaches with aging population and individuals with chronic disabling conditions. Occupational Therapy Practice Framework as well as productive activities, daily living skills, social participation, work, and leisure are explored. Prerequisite: 2.0 or better in previous OTA courses or permission of instructor. (SFCC)

OTA 232 — Group Dynamics Lab (1 cr)
Course is designed to develop effective interpersonal communication in clinical settings through lab instruction and practice. Emphasis is placed on basic listening skills, providing meaningful feedback, and cultivating group skills. This course utilizes both peer feedback and engagement of therapeutic use of self. Prerequisite: 2.0 or higher in previous OTA courses or permission of instructor. (SFCC)

OTA 242 — Occupational Performance and Children Lab (2 cr)
Course examines child development and occupational therapy practice for individuals from birth through 21, with a focus on physical and developmental disabilities, neurological dysfunctions and sensory processing concerns. Includes assessment, treatment plan and intervention, lab experiences related to treatment techniques and demonstration of knowledge of developmental stages in infants and children. Prerequisite: 2.0 or better in previous OTA courses or permission of instructor. (SFCC)

OTA 251 — Level I Clinical Fieldwork II (1 cr)
Course addresses mentoring, clinical reasoning skills, ethics and documentation for transition from student to practitioner. Prerequisite: Grade of 2.0 or better in OTA courses or permission of instructor. (SFCC)

OTA 252 — Level I Clinical Fieldwork III (1 cr)
Course addresses mentoring, clinical reasoning skills, ethics and documentation for transition from student to practitioner within a community-based clinical setting. Prerequisite: Grade of 2.0 or better in OTA courses or permission of instructor. (SFCC)

OTA 253 — Level II Clinical Fieldwork I (1-10 cr)
Eight weeks of fieldwork in contracted facility. Minimum of 40 hours a week of on-site skill practice. Repeatable up to 10 credits. Grading option: Pass/fail. Prerequisite: 2.0 or better in previous OTA courses or permission of instructor and concurrent enrollment in OTA 263. (SFCC)

OTA 254 — Level II Clinical Fieldwork II (10 cr)
Eight weeks of fieldwork in second contracted facility gaining on site skill practice. Prerequisite: 2.0 or better in previous OTA courses or permission of instructor and concurrent enrollment in OTA 263. (SFCC)

OTA 261 — Level I Clinical Fieldwork II Seminar (1 cr)
Seminar course taken in conjunction with OTA 251 Level I Clinical Fieldwork II. Seminar course focuses on professional behaviors, clinical expectations, therapeutic relationships, professional relationships, documentation of clinical experiences, health care policies and procedures and safety practices taking place within community clinic setting. Prerequisite: 2.0 or better in previous OTA courses or permission of instructor and concurrent enrollment in OTA 251. (SFCC)

OTA 263 — Fieldwork II Seminar (1-4 cr)
Fieldwork Seminar includes weekly topics of presentation/lecture with student contribution to discussion groups, recommended reading and Q and A sessions with focus on relevant clinical application as related to current fieldwork placement. Repeatable up to four credits. Prerequisite: 2.0 or better in previous OTA courses or permission of instructor and concurrent enrollment in OTA 253, 254. (SFCC)

OCEANOGRAPHY

OCEA& 101 — Intro to Oceanography (5 cr)
This course introduces students to the principles of Marine Science; the physical and chemical properties of Seawater; the fundamentals of Biology; the Organisms of the Sea; the structure and function of Marine Ecosystem; and the relationship of Humans to the Sea. (SCC)

ORTHOTIC-PROSTHETIC TECHNICIAN

OR-PR 111 — Prosthetic Tools and Materials (4 cr)
Become familiar with prosthetic bench tools and equipment, acquire basic proven tool operation skills, classify the general areas of the lab and use of special prosthetic equipment in the lab. As a prosthetic technician students work with many materials such as metals, leather, wood, plastic, etc. This course introduces students to the materials commonly used in prosthetics. (SFCC)

OR-PR 112 — Related Human Anatomy (3 cr)
In order for the orthotics and prosthetics technician to correctly fabricate orthoses and prostheses, it is necessary for him/her to have a basic knowledge of muscles and bones of the human body. To properly fabricate below-the-knee prosthetic devices in accordance with the measurement chart, a basic understanding of the anatomy of the below-the-knee residual limb is essential. Prerequisite: OR-PR 111. (SFCC)

OR-PR 114 — Below Knee Prosthetics (10 cr)
The technician learns to identify lower limb prosthetic components, interpret measurement charts, prepare PVA sleeves, lay up PTB socket, fabricate PTB soft insert, laminate PTB socket utilizing vacuum, prepare SACH feet, statically align and assemble unfinished PTB, fabricate the PTB knee cuff, fabricate the PTB waist belt with suspension attachment, duplicate alignment, shape and hollow out prosthesis, lay up and laminate the PTB prosthesis, and finish and assemble the below-knee prosthesis. Prerequisite: OR-PR 111, 112. (SFCC)

OR-PR 122 — Related Anatomy of the Above Knee Amputation (3 cr)
A basic understanding of anatomy of the above-the-knee residual limb. Prerequisite: OR-PR 111, 112, 114. (SFCC)

OR-PR 124 — Advanced Below Knee Prosthetics (4 cr)
Identify endoskeletal components, fabricate model, check socket, and liner for endoskeletal prosthesis, laminate endoskeletal socket, assemble, align and shape endoskeletal prosthesis. Prepare plaster model for locking liner prosthesis, prepare shuttle lock installation, fabricate check socket, assemble and align temporary prosthesis, transfer alignment, fabricate definitive socket, complete alignment transfer. Syme and partial foot prosthetics (discussion). Prerequisite: OR-PR 111, 112, 114, 122. (SFCC)

OR-PR 126 — Above-the-Knee Prosthetics (10 cr)
Interpret A-K information and measurement charts, make a plaster of Paris model for A-K socket. Prepare and lay up the A-K socket, laminate the socket, attach socket into extension block, statically align A-K prosthesis adjustable leg, make flexible leather belt, metal band, and attach hip joint, duplicate alignment of A-K prosthesis, and finish and assemble prosthesis. Prerequisite: OR-PR 111, 112, 114, 122, 124. (SFCC)

OR-PR 132 — Related Anatomy (Upper Extremity) (2 cr)
In order for the student to fabricate upper-extremity prosthetic devices in accordance with measurement charts, a basic understanding of the anatomy of upper extremity residual limbs is essential. Prerequisite: OR-PR 111, 112, 114, 122, 124, 126. (SFCC)

OR-PR 134 — Below Elbow Prosthetics (8 cr)
Students learn to identify and know the function of currently used upper limb prosthetic components, be able to interpret prosthetic measurement charts, fabricate a below elbow prosthesis as a long residual limb, and make a prosthesis for a short below elbow residual limb. Prerequisite: OR-PR 111, 112, 114, 122, 124, 126, 132. (SFCC)

OR-PR 136 — Above Elbow Prosthetics (7 cr)
Students learn to fabricate an AE prosthesis that is functional for the above-elbow amputee, and becomes knowledgeable in the check socket fabrication used on AE fittings. Prerequisite: OR-PR 111, 112, 114, 122, 124, 126, 132, 134. (SFCC)

OR-PR 138 — Clinical Prosthetics (6 cr)
The prosthetic student practices fabrication skill in an off-campus prosthetic laboratory. Prerequisite: OR-PR 111, 112, 114, 122, 124, 126, 132, 134, 136. (SFCC)

OR-PR 141 — Orthopedic Equipment and Materials (4 cr)
In order to become proficient at fabricating orthoses a student must be able to identify the function and proven choice of orthotic tools. Learning the best choice of equipment is critical to accurate fabrication, to be able to identify basic orthotic components and demonstrate mastery of basic orthotic metal working skills. Prerequisite: OR-PR 141. (SFCC)

OR-PR 142 — Spinal Anatomy Related to Orthotics (3 cr)
In order for the orthotics and prosthetics student to correctly fabricate orthoses and protheses, it is necessary for him/her to have basic knowledge of muscles and bones of the human body. To properly fabricate below-the-knee prosthetic devices in accordance with the measurement chart, a basic understanding of the anatomy of the below-the-knee residual limb is essential. Prerequisite: OR-PR 141 (SFCC)

OR-PR 144 — Spinal Orthotics (10 cr)
The student fabricates the metal framework of the lumbo-sacral orthosis, learn to cover a LS orthosis with leather, and fabricate a thoraco-lumbar orthosis and cover with leather. Prerequisite: OR-PR 141, 142. (SFCC)

OR-PR 152 — Foot and Ankle Skeletal Structure (3 cr)
In order to fabricate effective shoe modification and orthoses for control of the ankle and foot, a student will aquire a basic understanding of the foot-ankle skeletal structures. Prerequisite: OR-PR 141, 142, 144. (SFCC)

OR-PR 154 — Orthotic Shoe Fabrications (4 cr)
It is necessary for a student to develop skills in providing a base of support for the foot, to properly apply sole wedges as per prescription, fabricate shoe buildups of crepe or other material, and to accurately fabricate a foot orthoses (arch-support) per prescription. Prerequisite: OR-PR 141, 142, 144, 152. (SFCC)

OR-PR 156 — Ankle-Foot Orthosis (10 cr)
Interpret ankle-foot orthometry, shape stirrup to shoe and ankle, assemble an AFO without tibial torsion, with tibial torsion, fabricate leather work, and have a basic understanding of the varus and valgus corrective straps for the ankle. Prerequisite: OR-PR 141, 142, 144, 152, 154. (SFCC)

OR-PR 162 — Related Anatomy for the Above Knee Orthotics (1 cr)
A basic understanding of anatomy for the orthotics limbs. Prerequisite: OR-PR 141, 142, 144, 152, 154, 156. (SFCC)

OR-PR 164 — Above the Knee Orthotics (8 cr)
Interpret the knee-ankle-foot orthometry form and layout KAFO, construct metal work with and without tibial torsion of a KAFO, fabricate a KAFO with growth extensions, fabricate the leather work for the KAFO and fabricate knee control pads used in a KAFO. Prerequisite: OR-PR 141, 142, 144, 152, 154, 156, 162. (SFCC)

OR-PR 172 — Upper Extremity Anatomy Related to Orthotics (1 cr)
A basic understanding of upper extremity anatomy related to orthotics. Prerequisite: OR-PR 141, 142, 144, 152, 154, 156, 162, 164. (SFCC)

OR-PR 174 — Upper Extremity Orthotics (7 cr)
The student learns to identify wrist, hand and forearm anatomy; identify upper extremity components and interpret the orthometry forms; fabricate basic hand orthosis, wrist-hand orthosis (WHO), and learn vacuum forming of WHO. Prerequisite: OR-PR 141, 142, 144, 152, 154, 156, 162, 164, 172. (SFCC)

OR-PR 178 — Clinical Orthotics (6 cr)
In order to become proficient in fabricating orthotic devices, it is required that you practice your skills in an actual laboratory setting. Prerequisite: OR-PR 141, 142, 144, 152, 154, 156, 162, 164, 172, 174. (SFCC)

PALEONTOLOGY

PALEO 103 — Dinosaur Paleontology (5 cr)
Provides an overview of the history of dinosaur exploration and recovery with short biographies of the great dinosaur biologists and hunters. Provides a discussion of the differences between dinosaurs and other animals. Discusses current theories of dinosaur metabolism and life style. Provides audio-visual materials on well-known dinosaur collecting sites and museums. The CCS paleontological collection includes actual dinosaur bones and teeth, as well as invertebrate and plant fossils contemporary with the dinosaurs. These provide hands-on experiences. There are opportunities for preparation of molds and casts of fossil material. Discusses various extinction theories. Prerequisite: BIOL& 160 or permission of instructor. (SFCC)

PARALEGAL

LA 100 — Legal Careers Orientation (1 cr)
This course assists students in choosing careers in the legal field. Students acquire professional development plans. Prerequisite: 60 percentile/42 scaled score or better on the written section of the college's assessment test or receive a 2.0 grade or better in BT 109. (SCC)

LA 101 — Introduction to Paralegalism (2 cr)
Students learn the role of a paralegal in typical legal settings. Prerequisite: LA 100. (SCC)

LA 102 — Introduction to Legal Nursing (1 cr)
This course is a survey of the various roles for legal nurses across a spectrum of legal settings. Additionally, the course examines the professional demands, skills and expectations of the profession. Prerequisite: Permission of instructor/coordinator. (SCC)

LA 105 — Washington and Idaho Court Rules (3 cr)
Students learn to research Washington Court Rules for district, superior, appellate and federal court systems. Interpretation and application of rules as they relate to law office procedures are emphasized. Students also learn to distinguish procedural from substantive rules. The interrelationship of rules to the Washington Digest, Revised Code of Washington (RCW) and Appellate Court requirements is presented. Students review the Idaho Rules of Civil Procedures and Idaho rules of Criminal Procedure emphasizing how these rules differ from the Federal Rules of Civil Procedure. (SCC)

LA 110 — Legal Research and Writing (5 cr)
This course specifies practical use of legal resource tools on municipals, state and federal levels. Students learn to draft and prepare legal instruments and documents. Prerequisite: ENGL& 101. (SCC)

LA 118 — Instrument Drafting (3 cr)
This intensive course is for students who are at the end of their paralegal/legal nurse education. Frequent hands-on drafting, critiquing, editing, rewriting, and presenting representative legal instruments in litigation, domestic, criminal, real estate and commercial law are emphasized. Students can expect to experience a rapid improvement in their writing and thinking skills irrespective of their level prior to enrollment. Prerequisite: Permission of instructor. (SCC)

LA 120 — Law Office Computing (5 cr)
Students are introduced to high levels of streamlining and automating word processing functions in a law office. Macros, merging, creating, editing and formatting legal documents are emphasized. Prerequisite: Two college-level computer classes (CIS or LSEC) with a grade of 2.0 or higher; one of which must be LSEC 239. (SCC)

LA 130 — Legal Ethics (1 cr)
This course introduces the rules of professional conduct that govern the professional practice of attorneys. Topics include conflicts of interest, confidentiality, professionalism, advertising and solicitation, client funds, etc. Prerequisite: Permission of instructor/coordinator. (SCC)

LA 135 — Professional Effectiveness (1 cr)
Students learn professional effectiveness and how to become successful in the legal environment. Prerequisite: Permission of instructor/coordinator. (SCC)

LA 201 — Introduction to Probate (3 cr)
Students study wills and the necessary administration of various categories of estates. Prerequisite: LA 110. (SCC)

LA 207 — Domestic Relations and Estate Law (3 cr)
Students learn community property law characteristic of states in the western US. The law of marriage and dissolution of marriage is examined. Students study wills and the necessary administration of various categories of estates. (SCC)

LA 211 — Debtor-Creditor and Bankruptcy (3 cr)
Students study common law writs (attachments, garnishments, etc.), liquidation and reorganization bankruptcies, and the law of collection. Prerequisite: LA 110. (SCC)

LA 215 — Commercial Transaction (3 cr)
This course reviews the Uniform Commercial Code, commercial paper, bank and secure transactions, and electronic and bulk transfers. Various commercial statues are surveyed. (SCC)

LA 217 — Business Organizations (3 cr)
Students study partnership and corporation law for incorporation and administration of business in Washington state. (SCC)

LA 218 — Employment Law (3 cr)
Students review federal and state employment statutes governing hiring, termination, discrimination, affirmative action, workers' compensations and work-place safety. (SCC)

LA 219 — Criminal Law and Procedure (3 cr)
This course is an overview of the criminal justice system emphasizing the constitutional framework of criminal procedure. Prerequisite: LA 110. (SCC)

LA 220 — Torts (3 cr)
This course is a study of law that provides redress and compensation through a civil action. (SCC)

LA 221 — Property and Real Estate Transactions I (3 cr)
This course surveys Real Property Law covering estates in land. Real estate transactions including fundamentals of conveyancing law and statutes of frauds are emphasized. (SCC)

LA 225 — Trial Preparation and Procedures (3 cr)
Students study civil procedures and preparation of trial materials and their application to court rules. Pretrial preparation also is covered. (SCC)

LA 230 — Insurance Law (3 cr)
This course covers basic insurance terminology and presents a working knowledge of insurance laws that are frequently encountered in today's law office. (SCC)

LA 240 — Special Issues Seminar (1-10 cr)
Students survey various areas of the law, learn skills in critical thinking, and review new and emerging issues. The substance of the course varies. Prerequisite: Permission of instructor/coordinator. (SCC)

LA 245 — Supervised Legal Work Experience (1-8 cr)
This course provides an in-depth clinical experience required for all students enrolled in the paralegal or legal nurse programs. Students are supervised in the clinic by attorneys and the legal program coordinator. Students receive thorough experience in law office practices and procedures. Progress is monitored through a combination of in-class seminars and individualized instructor contact. Grading option: Pass/fail. Prerequisite: Permission of instructor/coordinator. (SCC)

LA 267 — Cooperative Education Work Experience (1-18 cr)
For course description, see Cooperative Education. (SCC)

LA 285 — Legal Office Internship (1-3 cr)
This course provides on-the-job learning experience for students while they attend classes at SCC. Students are able to apply the principles learned in the program to work in a law or law-related office under the supervision of an attorney or other legal professional. Grading option: Pass/fail. Prerequisite: Permission of instructor/coordinator. (SCC)

PHARMACY TECHNICIAN

PHARM 101 — Introduction to Pharmacy Technician (3 cr)
This course introduces students to practice roles of pharmacy technicians. Employment opportunities, medical terminology, drug dosage forms, IV infusion, introduction to prescription interpretation and pharmacy law are emphasized. (SCC)

PHARM 115 — Mathematics for Pharmacy Technicians (3-5 cr)
Students are introduced to the application of basic math skills to real-life scenarios in pharmacy technician career fields. This course includes review of basic skills, followed by applications of dosage calculations for IVs, tablets, liquids and injectables. Students are also introduced to the applications of math skills determined by body surface area, chemotherapy and pediatric dosing. (SCC)

PHARM 119 — Pharmacology (3 cr)
Students learn to identify drugs normally used in hospital and retail pharmacy settings. Therapeutic drug classifications, routes of administration, codes and abbreviations, and correct drug name spelling are emphasized. Students also learn to distinguish between generic and trade (brand) names of drugs. (SCC)

PHARM 122 — Advanced Pharmacology (5 cr)
Students learn to categorize the top 200 drugs into the major therapeutic classifications; distinguish between generic and brand names of drugs; identify accepted dosage forms, routes and dosing intervals of each drug. Human medical conditions relating to anatomy and physiology are emphasized. Prerequisite: PHARM 119. (SCC)

PHARM 123 — Hospital Pharmacy Dispensing and Management (5 cr)
Students learn to assist the pharmacist with preparing and dispensing prescription drugs within the hospital setting. Verbal and written communication skills are emphasized. Students are introduced to appropriate inventory control and purchasing. Prerequisite: PHARM 101, 119 with a 2.0 grade or better. (SCC)

PHARM 124 — Community Pharmacy Dispensing and Management (3 cr)
This course prepares students to develop the knowledge and skills needed to assist the pharmacist in preparing and dispensing prescription drugs in a community pharmacy setting. Verbal and written communications skills, prescription interpretation, and third party billing are emphasized. Prerequisite: PHARM 101, 119 with a 2.0 grade or better. (SCC)

PHARM 130 — Entering the Work Environment (2 cr)
This course prepares students for success in health careers. Students learn job-readiness skills including work ethics, professionalism, resume writing, communication skills and self-esteem. (SCC)

PHARM 131 — Pharmacy Law and Ethics (3 cr)
Students learn the law relating to pharmacy, agencies that regulate pharmacy practice and quality assurance. (SCC)

PHARM 132 — Community Pharmacy (6 cr)
The course introduces students to the procedures permitted the pharmacy technician in the state of Washington regarding community pharmacy. Prerequisite: PHARM 122, 123, 124 with a 2.0 grade or better. (SCC)

PHARM 133 — Hospital Pharmacy (6 cr)
This course offers clinical practice to perfect students' competence in performing pharmacy technician functions that take place under direct supervision of the pharmacist. Students work in a hospital pharmacy assisting the pharmacist. Prerequisite: Completion of all prior required courses with a 2.0 grade or better. (SCC)

PHILOSOPHY

PHIL& 101 — Intro to Philosophy (5 cr)
Designed to enable students to examine the fundamental problems in philosophy by reading selectively the writings of the significant philosophers and analyzing them in discussion seminars. The lectures are designed to develop a perspective and sense of continuity toward the growth of Western thought. Prerequisite: SFCC recommended minimum reading placement score: COMPASS 80, ASSET 40. (SCC, SFCC)

PHIL& 106 — Intro to Logic (5 cr)
A basic introduction to deductive and inductive logic, the nature of formal deductive proof and its application to the traditional logical problems. Prerequisite: SFCC recommended minimum reading placement score: COMPASS 80, ASSET 40. (SCC, SFCC)

PHIL 210 — Ethics (5 cr)
A systematic and historical analysis of some of the problems in ethics. An examination of some of the principle ethical positions and the criteria for their solutions. Prerequisite: SFCC recommended minimum reading placement score: COMPASS 80, ASSET 40. (SCC, SFCC)

PHIL 215 — Environmental Philosophy (5 cr)
Students explore the philosophical relationship between human beings and the non-human world. The moral status of animals and ecosystems, anthropocentrism versus biocentrism, environmental economics and public policy, deep ecology, ecofeminism, and the idea of a "land ethic" are emphasized. (SCC, SFCC)

PHIL 220 — Philosophy of Religion (5 cr)
The course is designed to give the student an understanding of both classical and contemporary philosophy of religion by concentrating on the nature of religion, religious disagreements, the existence of God, the problem of evil, the relation between faith and reason, and religious language. Prerequisite: SFCC recommended minimum reading placement score: COMPASS 80, ASSET 40. (SCC, SFCC)

PHIL 231 — Modern Philosophical Problems (5 cr)
The course includes both purely philosophical and literary manifestations of existentialism. Treatment follows a historical progression from the 19th century forerunners of existentialism (Dostoevsky, Nietzsche, Kierkegaard) to the major modern representatives (Heidegger, Jaspers, Sartre and Camus). Prerequisite: PHIL& 101 or PHIL 210 or permission of instructor. SFCC recommended minimum reading placement score: COMPASS 80, ASSET 40. (SCC, SFCC)

PHIL 266 — Cooperative Education Seminar (1-2 cr)
For course description, see Cooperative Education. (SFCC)

PHIL 267 — Cooperative Education Work Experience (1-8 cr)
For course description, see Cooperative Education. (SFCC)

PHOTOGRAPHY

PHOTO 101 — Introduction to Photography (5 cr)
This course introduces black and white photography from a historical, artistic and experiential perspective. Students learn basic camera operation, printmaking and composition while exploring the cultural impact photography has on society. (SFCC)

PHOTO 102 — Photographic Appreciation (2 cr)
Students explore current and historical trends in photography and identify career opportunities in a wide variety of visual communication fields. Students discover the work of photographers and designers who have had significant impact on the field and learn to speak the "language" of photography in a professional environment. (SFCC)

PHOTO 111 — Studio Photography I (4 cr)
Students learn to control lighting and exposure in a studio environment while exploring a variety of subjects, including still life, commercial product and people photography. Students learn to identify the characteristics of light on a subject, operate studio lighting equipment and master a variety of metering techniques to calculate proper exposure. Prerequisite: PHOTO 101. (SFCC)

PHOTO 112 — Photographic Design (4 cr)
Students in this course discover the artistic substance of photography through the application of design principles in photography. Students compose images that are balanced, exhibit depth, and explore the relationship between visual elements, emotions and ideas. Students learn to assess their work and formulate criteria for critiquing photography and design. Prerequisite: PHOTO 101 or permission of instructor. (SFCC)

PHOTO 115 — Photography Lab II (3 cr)
Students apply the skills acquired in second-quarter photography classes and develop work habits to meet employer standards when using darkroom and shooting room facilities in the photography building. Prerequisite: PHOTO 101. (SFCC)

PHOTO 120 — Photographic Arts (3 cr)
Students develop artistic interpretations of black and white images by applying alternative printing techniques. Topics include solarization, photo montages, selective toning, polaroid image transfers, and applying photographic emulsions to other media including canvas, water color paper and ceramic substrates. Prerequisite: PHOTO 101 or permission of department or division. (SFCC)

PHOTO 121 — Location Photography I (4 cr)
This course applies the principles of studio photography outside of the studio by teaching students to analyze and modify lighting conditions on location. Students identify the effects of different types of light sources and apply supplemental lighting to make dynamic exposures of people, products, interior design and architectural landscapes. Prerequisite: PHOTO 101. (SFCC)

PHOTO 125 — Photography Lab III (3 cr)
Students in this course apply the skills acquired in third-quarter photography classes and develop work habits to meet employer standards when using darkroom and shooting room facilities in the photography building. Prerequisite: PHOTO 115. (SFCC)

PHOTO 126 — Digital Photography I (5 cr)
Using the latest image-editing software, students explore the creative possibilities of digital imaging while retouching and creating multiple image composites. Students acquire knowledge of technical requirements to create photographic quality images using computers, scanners, digital printers and cameras. (SFCC)

PHOTO 131 — Introduction to Photojournalism (3 cr)
Students in this course assume the role of photojournalist while investigating the ethical issues involved with journalism in America. Students tell stories with pictures, develop an eye for alternative image perspectives, gather accurate assignment information and work with editors in a fast-paced environment. Students are provided an opportunity to visit with working professionals and to explore career opportunities in journalism. (SFCC)

PHOTO 132 — Advanced Black and White Photography (3 cr)
This course provides students an opportunity to fully explore the capabilities of black and white photography while learning the Zone system and advanced darkroom techniques. Prerequisite: PHOTO 101 or permission of instructor. (SFCC)

PHOTO 133 — Color Lab (3 cr)
Students in this course learn to make color prints and process color film and transparencies. Instruction includes working in a photo-finishing lab while mastering push and pull film processing, color printing, and mixing chemistry. Prerequisite: PHOTO 101 or permission of instructor. (SFCC)

PHOTO 200 — Photography Media (4 cr)
This course focuses on photography as a communication tool. Instead of concentrating on a single image, students script and produce a multimedia presentation that combines still-images, sounds, text and graphics. Students explore ways to market multimedia presentations to corporations and government agencies, and survey current multimedia technology. Prerequisite: PHOTO 101. (SFCC)

PHOTO 205 — Photography Lab IV (3 cr)
Students in this course apply skills acquired in their fourth-quarter photography courses and develop work habits to meet employer standards when using darkroom and shooting room facilities in the photography building. Prerequisite: PHOTO 125. (SFCC)

PHOTO 215 — Photography Lab V (3 cr)
Students in this course apply the skills acquired in their fifth-quarter photography classes and develop work habits to meet employer standards while using darkroom and shooting room facilities in the photography building. Prerequisite: PHOTO 205. (SFCC)

PHOTO 225 — Photography Lab VI (3 cr)
Students is this course apply the skills learned in their sixth-quarter photography classes and develop work habits to meet employer standards while using darkroom and shooting room facilities in the photography building. Prerequisite: PHOTO 215. (SFCC)

PHOTO 227 — Business of Photography (3 cr)
Students in this course set career goals and develop a comprehensive personal plan of action. Students gain knowledge of business practices unique to the field of photography, while taking inventory of the skills necessary to be successful. Topics include different methods for earning income, development of a step-by step strategy to achieve success, business contracts, customer service policies, marketing, financial breakdowns of pricing strategies, sales presentations, professional associations and sources for further education. Prerequisite: PHOTO 205. (SFCC)

PHOTO 231 — Studio Photography II (4 cr)
Students expand their knowledge of a variety of lighting and metering techniques introduced in PHOTO 111 to create dynamic images of people and products for advertising layouts. Students develop problem-solving skills as they work with art directors, prepare bids and research current trends in commercial photography. Prerequisite: PHOTO 111. (SFCC)

PHOTO 232 — Portraiture (4 cr)
This class focuses on the skills necessary for working with people in the portrait photography field. Students discover lighting and posing techniques to augment an individual's appearance while exploring the variety of markets for portrait photography including high school seniors, weddings, families, executives, children and fine-art portraiture. Prerequisite: PHOTO 101 or permission of instructor. (SFCC)

PHOTO 233 — Location Photography II (4 cr)
Students in this course apply a variety of lighting, metering and color correction techniques introduced in PHOTO 121 to gain experience in the corporate and industrial segments of commercial photography. Subjects vary from architectural design, corporate communication and working with fashion models on location. Prerequisite: PHOTO 121. (SFCC)

PHOTO 234 — Digital Photography II (5 cr)
Students in this course apply aquired skills aquired to create imaginative photographic illustrations and prepare them for publication. An emphasis is placed on color management and preparing images for the Internet. Prerequisite: PHOTO 126. (SFCC)

PHOTO 235 — Nature and Landscape Photography (5 cr)
This course teaches students to refine their composition skills while capturing images of nature, wildlife and landscapes. Marketing of images through publishers, stock agencies and art galleries is discussed. Prerequisite: PHOTO 101 or permission of instructor. (SFCC)

PHOTO 236 — Photography Workshop (1-4 cr)
This class enables students to keep abreast of current trends and conduct research projects in various facets of photography. This course may be repeated for up to 12 credits. (SFCC)

PHOTO 237 — Introduction to Documentary DV Production (5 cr)
Students examine a variety of creative approaches to filmmaking while using current digital video technology to produce their own short films. Students explore the history of "non-fiction" filmmaking and identify the major characteristics of the documentary genre. Special emphasis is placed on identifying relevant applications of digital video technology within the photographic industry such as: Wedding and event videography, corporate communications and short documentaries. (SFCC)

PHOTO 238 — Fashion Photography (4 cr)
Students explore historical origins, the role of photography in shaping fashion trends, major historical movements and photographic masters and trendsetters of fashion photography. This class focuses on the knowledge and skills necessary for producing effective fashion, beauty, glamour, and product imagery for advertising and editorial purposes. Advanced lighting and posing techniques, in studio and on location, are stressed. Photographic assignments explore preproduction, pose, wardrobe, propping and environment while creating conceptually stylized imagery. Post-production techniques include digital retouching and preparing images for publication. Prerequisite: PHOTO 101, 126 or permission of instructor. (SFCC)

PHOTO 240 — Large Format Photography (4 cr)
Students explore the photographic techniques and the mechanics of the large format view camera. Focus is on building a technical knowledge while developing skills in large format camera use. Topics covered include a historical overview of the view camera, view camera design, optical principals, camera movements and operations. Assignment work stresses practical applications in still- life, architecture, portraiture, and landscape and macro photography. Prerequisite: PHOTO 101 or permission of instructor. (SFCC)

PHOTO 266 — Cooperative Education Seminar (1-2 cr)
For course description, see Cooperative Education. (SFCC)

PHOTO 267 — Cooperative Education Work Experience (1-18 cr)
For course description, see Cooperative Education. (SFCC)

PHYSICAL EDUCATION

PE 100 — Fitness for Life (1 cr)
This course is designed to acquaint students with proper methods and techniques for establishing an individualized personal wellness and fitness program. It is conducted in the campus Fitness Center and includes personalized inventory and appraisal of current fitness level and explores options available to improve cardiovascular endurance, weight control, strength and flexibility. (SCC, SFCC)

PE 101 — Beginning Volleyball (1 cr)
Fundamental skills, rules, etiquette and strategy; development of skills through drills and competitive play. (SCC, SFCC)

PE 106 — Yoga Fitness (1 cr)
This course promotes individual fitness and total mind-body health. Strength and stretching movements, flexibility and breathing exercises, and relaxation techniques are presented. (SCC, SFCC)

PE 107 — Jogging (1 cr)
Course designed to improve the student's level of physical fitness and wellness, teach proper methods of running/jogging, encourage proper body weight and body fat levels, and establish a permanent habit of exercise. (SCC, SFCC)

PE 108 — Beginning Tennis (1 cr)
Basic skills and techniques needed for singles and doubles play. Court etiquette, rules, strategy, scoring and terminology. (SCC, SFCC)

PE 114 — Beginning Karate (1 cr)
Fundamental skills, philosophy, rules and strategy of karate. Emphasizes a combination of skill, power and discipline. (SCC, SFCC)

PE 115 — Beginning Soccer (1 cr)
Basic skills, strategy and team play involved in the game of soccer. (SCC, SFCC)

PE 116 — Beginning Basketball (1 cr)
Fundamentals of ball handling, shooting, passing, and techniques of offensive and defensive play. Competitive play situations provided. (SCC, SFCC)

PE 117 — Kickboxing (1 cr)
Students learn the basic skills, techniques and safety procedures of kickboxing. Sport specific activities to improve individual balance, strength, endurance and cardiovascular conditioning are emphasized. (SCC, SFCC)

PE 118 — Beginning Bowling (1 cr)
This course is designed to teach fundamental skills, rules, techniques, scoring and etiquette of bowling. (SCC, SFCC)

PE 120 — Beginning Softball (1 cr)
Fundamentals of team play, rules and game strategies. Emphasis placed on participation by all. (SCC, SFCC)

PE 122 — Beginning Skiing (1 cr)
Instruction at all levels of competency in the skills and techniques of skiing. Classes are held at Mt. Spokane. (SCC, SFCC)

PE 126 — Beginning Golf (1 cr)
Practice and development of fundamental skills, rules and etiquette of golf. (SCC, SFCC)

PE 127 — Beginning Jazz Dance (1 cr)
Course includes jazz dance oriented stretching and warm-ups. Class will learn jazz combinations, walks and steps incorporated in a variety of dance routines. (SFCC)

PE 135 — Gymnastics (1 cr)
Gymnastics basics covering beginning, intermediate and advanced levels in the areas of tumbling, flexibility, vaulting, bars and balance beam. (SCC)

PE 139 — Weight Training (1 cr)
This course covers modern weight training techniques, including strength and endurance training, and flexibility and coordination. Students learn proper techniques of both Olympic freebar weights and machine circuit training programs. (SCC, SFCC)

PE 140 — Beginning Ski Conditioning (1 cr)
Ski conditioning class is an intense concentration of exercises that complement the basic movements of skiing. The emphasis is on improving the general level of body conditioning, flexibility and improvement of cardiovascular functions as they relate to skiing. (SCC, SFCC)

PE 141 — Theory and Conditioning of Soccer (2 cr)
This is an intense program of physical activity to enhance flexibility, strength, endurance and cardiovascular functions. The course is designed for students interested in individual and team competition. (SCC, SFCC)

PE 143 — Theory and Conditioning of Basketball (2 cr)
This is an intense program of physical activity to enhance flexibility, strength, endurance and cardiovascular function. The course is designed for students interested in individual and team competition. (SCC, SFCC)

PE 144 — Theory and Conditioning of Softball (2 cr)
This is an intense program of physical activity to enhance flexibility, strength, endurance and cardiovascular functions. The course is designed for students interested in individual and team competition. (SCC, SFCC)

PE 145 — Theory and Conditioning of Baseball (2 cr)
This is an intense program of physical activity to enhance flexibility, strength, endurance and cardiovascular functions. The course is designed for students interested in individual and team competition. (SCC, SFCC)

PE 146 — Theory and Conditioning of Cross Country (2 cr)
This is an intense program of physical activity to enhance flexibility, strength, endurance and cardiovascular functions. The course is designed for students interested in individual and team competition. (SCC, SFCC)

PE 147 — Theory and Conditioning of Track (2 cr)
This is an intense program of physical activity to enhance flexibility, strength, endurance and cardiovascular functions. The course is designed for students interested in individual and team competition. (SCC, SFCC)

PE 149 — Theory and Conditioning of Golf (2 cr)
This is a complete offering of skill development, playing strategies, course management, and concepts and rules mastery as they relate to the game of golf. The course is designed for students interested in individual and team competition. (SCC, SFCC)

PE 151 — Theory and Conditioning of Tennis (2 cr)
This is an intense program of physical activity to enhance flexibility, strength, endurance and cardiovascular functions. The course is designed for students interested in individual and team competition. (SCC, SFCC)

PE 154 — Theory and Conditioning of Volleyball (2 cr)
This is an intense program of physical activity to enhance flexibility, strength, endurance and cardiovascular functions. The course is designed for students interested in individual and team competition. (SCC, SFCC)

PE 156 — Techniques of Soccer (3 cr)
This course is a study of the rules, team organization, techniques and strategy of soccer. (SCC, SFCC)

PE 157 — Track Techniques (3 cr)
This course is a study of the rules, techniques, and strategy of track and field events. (SCC, SFCC)

PE 158 — Techniques of Tennis (3 cr)
This course presents intense techniques of tennis designed for students interested in competitive play in either singles or doubles. Advanced drills, footwork, agility and conditioning for competitive play are emphasized. (SCC, SFCC)

PE 159 — Techniques of Golf (3 cr)
This course is a study of the rules, techniques, fundamentals and skills of golf. It is designed for students interested in individual and team competition. (SCC, SFCC)

PE 160 — Techniques of Volleyball (3 cr)
This course is a study of the rules, team organization, techniques and strategies of volleyball. (SCC, SFCC)

PE 164 — Techniques of Basketball (3 cr)
This course presents an intense study of proper basketball techniques, fundamentals and skills. Individual and team offensive and defensive strategies and philosophies also are presented. The course is designed for students interested in individual and team competition. (SCC, SFCC)

PE 165 — Techniques of Baseball (3 cr)
This course is designed to develop knowledge and physical skills of baseball in a laboratory setting. Students learn rules and strategies of baseball, and basic fundamentals of hitting, throwing and catching as applied to the individual's position or positions. (SCC, SFCC)

PE 169 — Techniques of Softball (3 cr)
This course is designed for students interested in competitive fast pitch softball. Advanced drills, skills, techniques and conditioning for competitive play are emphasized. (SCC, SFCC)

PE 170 — Introduction to Physical Education and Recreation (3 cr)
This course is designed to develop introductory skills and increase knowledge in the occupational areas of health, physical education, recreation and coaching. Students learn historical factors that have shaped the profession, current trends, philosophies and objectives of physical education. (SCC, SFCC)

PE 177 — Beginning Body Conditioning (1 cr)
A variety of activities that lead to overall improvement of body conditioning, weight training, walking, jogging, calisthenics and organized physical activities will be employed to increase efficiency of cardiovascular functions. (SCC, SFCC)

PE 182 — Beginning Ballet (1 cr)
Introduction and explanation of ballet from fundamental to more complex techniques. (SFCC)

PE 185 — Beginning Aerobic Fitness (1 cr)
A program of stretching and aerobic conditioning set to music. Course designed to improve and appraise flexibility, strength and cardiovascular fitness through a variety of aerobic techniques. (SCC, SFCC)

PE 186 — Fast Fitness, Beginning (1 cr)
Comprehensive physical fitness course designed to develop strength, flexibility, muscular endurance and cardiovascular efficiency in an effective and timely manner through the use of circuits. (SCC, SFCC)

PE 187 — Cross Training (2 cr)
The term cross training is the involvement of a variety of different activities into a single coordinated program. The objective is to achieve high levels of strength, endurance and flexibility while at the same time preventing injuries. It is necessary to include different types of activities into a weekly routine. The cross training class focuses on the following: Development of a comprehensive, personalized fitness program utilizing the state-of-the-art equipment in the Fitness Center. The course will require a basic knowledge of the fast fitness circuit concept and an understanding of the cardiovascular equipment. Individual programs will incorporate the use of all exercise equipment in the Fitness Center. In addition, individuals need to include other activities such as running, rowing, cycling, stair climbing, cross-country skiing, free weight training, in-line skating and walking. Monthly goals are predetermined and a daily training record will be kept to evaluate the individual's progress toward his/her goals. (SCC, SFCC)

PE 188 — Basic Fitness I (2 cr)
This initial fitness course includes one lecture session per week covering the basic "how to's" of exercise and nutrition, starting a fitness program, eating for maximum energy and weight management. Students participate in two activity sessions per week of low-level, nonimpact and nonintimidating activities. Students take a personalized inventory and appraisal of their current fitness level and explore options available to improve cardiovascular endurance, weight control, strength and flexibility. (SCC, SFCC)

PE 200 — Fitness for Life (1 cr)
This course is designed to acquaint students with proper methods and techniques for establishing an individualized personal wellness and fitness program. It is conducted in the campus Fitness Center and includes personalized inventory and appraisal of current fitness level and explores options available to improve cardiovascular endurance, weight control, strength and flexibility. (SCC, SFCC)

PE 201 — Advanced Volleyball (1 cr)
Fundamental skills, rules, etiquette and strategy; development of skills through drills and competitive play. (SCC, SFCC)

PE 206 — Yoga Fitness (1 cr)
This course promotes individual fitness and total mind-body health. Strength and stretching movements, flexibility and breathing exercises, and relaxation techniques are presented. (SCC, SFCC)

PE 207 — Jogging (1 cr)
Course designed to improve the student's level of physical fitness and wellness, teach proper methods of running/jogging, encourage proper body weight and body fat levels, and establish a permanent habit of exercise. (SCC, SFCC)

PE 208 — Advanced Tennis (1 cr)
Basic skills and techniques needed for singles and doubles play. Court etiquette, rules, strategy, scoring and terminology. (SCC, SFCC)

PE 214 — Advanced Karate (1 cr)
Fundamental skills, philosophy, rules and strategy of karate. Emphasizes a combination of skill, power and discipline. (SCC, SFCC)

PE 215 — Advanced Soccer (1 cr)
Basic skills, strategy and team play involved in the game of soccer. (SCC, SFCC)

PE 216 — Advanced Basketball (1 cr)
Fundamentals of ball handling, shooting, passing, and techniques of offensive and defensive play. Competitive play situations provided. (SCC, SFCC)

PE 217 — Kickboxing (1 cr)
Students learn the basic skills, techniques and safety procedures of kickboxing. Sport specific activities to improve individual balance, strength, endurance and cardiovascular conditioning are emphasized. (SCC, SFCC)

PE 218 — Advanced Bowling (1 cr)
This course is designed to teach fundamental skills, rules, techniques, scoring and etiquette of bowling. (SCC, SFCC)

PE 220 — Advanced Softball (1 cr)
Fundamentals of team play, rules and game strategies. Emphasis placed on participation by all. (SCC, SFCC)

PE 222 — Advanced Skiing (1 cr)
Instruction at all levels of competency in the skills and techniques of skiing. Classes are held at Mt. Spokane. (SCC, SFCC)

PE 226 — Advanced Golf (1 cr)
Practice and development of fundamental skills, rules and etiquette of golf. (SCC, SFCC)

PE 227 — Advanced Jazz Dance (1 cr)
Course includes jazz dance oriented stretching and warm-ups. Class will learn jazz combinations, walks and steps incorporated in a variety of dance routines. (SFCC)

PE 235 — Gymnastics (1 cr)
Gymnastics basics covering beginning, intermediate and advanced levels in the areas of tumbling, flexibility, vaulting, bars and balance beam. (SCC)

PE 239 — Weight Training (1 cr)
This course covers modern weight training techniques, including strength and endurance training, and flexibility and coordination. Students learn proper techniques of both Olympic freebar weights and machine circuit training programs. (SCC, SFCC)

PE 240 — Advanced Ski Conditioning (1 cr)
Ski conditioning class is an intense concentration of exercises that complement the basic movements of skiing. The emphasis is on improving the general level of body conditioning, flexibility and improvement of cardiovascular functions as they relate to skiing. (SCC, SFCC)

PE 241 — Theory and Conditioning of Soccer (2 cr)
This is an intense program of physical activity to enhance flexibility, strength, endurance and cardiovascular functions. The course is designed for students interested in individual and team competition. (SCC, SFCC)

PE 243 — Theory and Conditioning of Basketball (2 cr)
This is an intense program of physical activity to enhance flexibility, strength, endurance and cardiovascular function. The course is designed for students interested in individual and team competition. (SCC, SFCC)

PE 244 — Theory and Conditioning of Softball (2 cr)
This is an intense program of physical activity to enhance flexibility, strength, endurance and cardiovascular functions. The course is designed for students interested in individual and team competition. (SCC, SFCC)

PE 245 — Theory and Conditioning of Baseball (2 cr)
This is an intense program of physical activity to enhance flexibility, strength, endurance and cardiovascular functions. The course is designed for students interested in individual and team competition. (SCC, SFCC)

PE 246 — Theory and Conditioning of Cross Country (2 cr)
This is an intense program of physical activity to enhance flexibility, strength, endurance and cardiovascular functions. The course is designed for students interested in individual and team competition. (SCC, SFCC)

PE 247 — Theory and Conditioning of Track (2 cr)
This is an intense program of physical activity to enhance flexibility, strength, endurance and cardiovascular functions. The course is designed for students interested in individual and team competition. (SCC, SFCC)

PE 249 — Theory and Conditioning of Golf (2 cr)
This is a complete offering of skill development, playing strategies, course management, and concepts and rules mastery as they relate to the game of golf. The course is designed for students interested in individual and team competition. (SCC, SFCC)

PE 251 — Theory and Conditioning of Tennis (2 cr)
This is an intense program of physical activity to enhance flexibility, strength, endurance and cardiovascular functions. The course is designed for students interested in individual and team competition. (SCC, SFCC)

PE 254 — Theory and Conditioning of Volleyball (2 cr)
This is an intense program of physical activity to enhance flexibility, strength, endurance and cardiovascular functions. The course is designed for students interested in individual and team competition. (SCC, SFCC)

PE 256 — Techniques of Soccer (3 cr)
This course is a study of the rules, team organization, techniques and strategy of soccer. (SCC, SFCC)

PE 257 — Track Techniques (3 cr)
This course is a study of the rules, techniques, and strategy of track and field events. (SCC, SFCC)

PE 258 — Techniques of Tennis (3 cr)
This course presents intense techniques of tennis designed for students interested in competitive play in either singles or doubles. Advanced drills, footwork, agility and conditioning for competitive play are emphasized. (SCC, SFCC)

PE 259 — Techniques of Golf (3 cr)
This course is a study of the rules, techniques, fundamentals and skills of golf. It is designed for students interested in individual and team competition. (SCC, SFCC)

PE 260 — Techniques of Volleyball (3 cr)
This course is a study of the rules, team organization, techniques and strategies of volleyball. (SCC, SFCC)

PE 264 — Techniques of Basketball (3 cr)
This course presents an intense study of proper basketball techniques, fundamentals and skills. Individual and team offensive and defensive strategies and philosophies also are presented. The course is designed for students interested in individual and team competition. (SCC, SFCC)

PE 265 — Techniques of Baseball (3 cr)
This course is designed to develop knowledge and physical skills of baseball in a laboratory setting. Students learn rules and strategies of baseball, and basic fundamentals of hitting, throwing and catching as applied to the individual's position or positions. (SCC, SFCC)

PE 266 — Cooperative Education Seminar (1-2 cr)
For course description, see Cooperative Education. (SCC, SFCC)

PE 267 — Cooperative Education Work Experience (1-3 cr)
For course description, see Cooperative Education. (SCC, SFCC)

PE 269 — Techniques of Softball (3 cr)
This course is designed for students interested in competitive fast pitch softball. Advanced drills, skills, techniques and conditioning for competitive play are emphasized. (SCC, SFCC)

PE 270 — Nutrition for Fitness (3 cr)
This course provides students with a working knowledge of prudent nutritional practices and focuses on issues of concern to individuals who are active in physical fitness programs. In addition to basic nutritional information, the course covers topics with special applications to the fitness field, such as the nutritional requirements of different activities, planning training diets and pregame meals. The effects of ergogenic foods on performance, fluid and electrolyte balance also are covered. (SCC, SFCC)

PE 272 — Psychology of Athletic Achievement (3 cr)
This course provides the student with the principles and practices of personal achievement as applied to athletics and academic endeavors. Techniques of developing a positive self-image through understanding and application of basic philosophies relating to goal setting, motivation and personal discipline are introduced. (SCC, SFCC)

PE 277 — Advanced Body Conditioning (1 cr)
A variety of activities that lead to overall improvement of body conditioning, weight training, walking, jogging, calisthenics and organized physical activities will be employed to increase efficiency of cardiovascular functions. (SCC, SFCC)

PE 282 — Advanced Ballet (1 cr)
Introduction and explanation of ballet from fundamental to more complex techniques. (SFCC)

PE 285 — Advanced Aerobic Fitness (1 cr)
A program of stretching and aerobic conditioning set to music. Course designed to improve and appraise flexibility, strength and cardiovascular fitness through a variety of aerobic techniques. (SCC, SFCC)

PE 286 — Fast Fitness, Advanced (1 cr)
Comprehensive physical fitness course designed to develop strength, flexibility, muscular endurance and cardiovascular efficiency in an effective and timely manner through the use of circuits. (SCC, SFCC)

PE 287 — Cross Training (2 cr)
The term cross training is the involvement of a variety of different activities into a single coordinated program. The objective is to achieve high levels of strength, endurance and flexibility while at the same time preventing injuries. It is necessary to include different types of activities into a weekly routine. The cross training class focuses on the following: Development of a comprehensive, personalized fitness program utilizing the state-of-the-art equipment in the Fitness Center. The course will require a basic knowledge of the fast fitness circuit concept and an understanding of the cardiovascular equipment. Individual programs will incorporate the use of all exercise equipment in the Fitness Center. In addition, individuals need to include other activities such as running, rowing, cycling, stair climbing, cross-country skiing, free weight training, in-line skating and walking. Monthly goals are predetermined and a daily training record will be kept to evaluate the individual's progress toward his/her goals. (SCC, SFCC)

PE 288 — Basic Fitness II (2 cr)
Students utilize advanced concepts of fitness and exercise developed in PE 188. Knowledge of wellness and fitness is enhanced through completion of 10 self-motivated independent study modules. Prerequisite: PE 188. (SCC, SFCC)

PHYSICAL THERAPIST ASSISTANT

PTA 101 — Introduction to Physical Therapy (3 cr)
This course is an introduction to the practice of physical therapy emphasizing the role of the physical therapist assistant as a member of the health care team. Investigation of the law pertaining to the practice of physical therapy and ethical conduct are covered. Issues of teamwork, interpersonal communication skills and patient motivation will be explored. Prerequisite: Acceptance into PTA program. (SFCC)

PTA 102 — Physical Therapy Terminology (1 cr)
This course is a supervised self-study of medical terminology and abbreviations used to describe the anatomy, physiology and pathology of the body systems used in relationship to the practice of physical therapy. Terms associated with diagnostics, surgery, laboratory tests, pharmacology and patient care are included. Prerequisite: Acceptance into PTA program. (SFCC)

PTA 103 — Applied Anatomy (6 cr)
Course offering includes instruction in human anatomy with an emphasis on the musculoskeletal system, external palpation and identification of structures, and relationship to function. Introduction to kinesiology. Prerequisite: Grade of 2.0 or better in PTA courses or permission of instructor. (SFCC)

PTA 104 — Survey of Pathophysiology (5 cr)
This course includes a basic overview of disease processes, including general pathological responses and the physiology of healing and repair. A description of specific diseases and conditions, and the medical and surgical forms of treatment as they relate to rehabilitation is covered and there is discussion of systemic origins of musculosketetal pain. Prerequisite: Grade of 2.0 or better in PTA courses or permission of instructor. (SFCC)

PTA 105 — Introduction to Neuroscience (4 cr)
An introduction to the structures and basic functions of the nervous system in relationship to physical therapy treatment of patients with neurological diagnoses is offered in this course. Prerequisite: Grade of 2.0 or better in PTA courses or permission of instructor. (SFCC)

PTA 106 — Regional Human Anatomy and Physiology (5 cr)
Human body structure and function from a regional viewpoint with emphasis on the skeletal, muscular and nervous systems; the respiratory and cardiovascular systems and introduction of digestive and endocrine systems. Prerequisite: BIOL& 241. (SFCC)

PTA 110 — PTA Procedures I: Basic PT Procedures (7 cr)
Basic patient care skills including vital signs, bandaging, aseptic techniques, wound care and athletic taping are offered in this course. Preparation of patient and treatment environment, as well as theory and application of superficial heat, cold and hydrotherapy are covered. Prerequisite: Acceptance into PTA program. (SFCC)

PTA 111 — PTA Procedures II: PT Modalities (7 cr)
The focus of study is on theory and application of deep heat modalities, principles and application of basic massage techniques, and the introduction to fundamentals of traction and electrotherapy. Prerequisite: Grade of 2.0 or better in PTA 110 and all PTA courses. (SFCC)

PTA 112 — PTA Procedures III: Functional Restoration (7 cr)
Instruction addresses physical restoration techniques including bed mobility, patient transfers, postural analysis, principles of normal and abnormal ambulation, use of assistive devices, and selected functional rehabilitation activities. Prerequisite: Grade of 2.0 or better in PTA 111 and all PTA courses. (SFCC)

PTA 151 — Clinical Experience I (2 cr)
Supervised clinical observation and experience in a variety of physical therapy clinic settings affiliated with the college are provided. A clinical discussion group focuses on interpersonal communication and patient interaction, oral and written patient progress reports, and effective problem-solving skills. Prerequisite: Grade of 2.0 or better in all PTA courses or permission of instructor. (SFCC)

PTA 201 — Issues in Physical Therapy and Health Care (2 cr)
This course is a survey of medical, legal, and psychosocial issues relating to the role of the physical therapist assistant in various physical therapy facilities and in the delivery of health care. Emphasis is on the goals of physical therapy and how the PTA can influence the achievement of those goals. Prerequisite: Grade of 2.0 or better in PTA courses or permission of instructor. (SFCC)

PTA 202 — Introduction to Orthopedics (3 cr)
This course is the basic introduction to biomechanics and mechanisms of orthopedic injuries and diseases. Fundamentals of orthopedic terminology are addressed, and a survey of surgical repair with emphasis on rehabilitation is included. Prerequisite: Grade of 2.0 or better in PTA courses or permission of instructor. (SFCC)

PTA 210 — PTA Procedures IV: Therapeutic Exercise (7 cr)
Instruction addresses therapeutic exercise and selected kinesiological principles related to exercise. Also addressed are basic principles of selected physical therapy testing procedures. Specific exercise protocols and prosthetic and orthotic devices are studied. Patient motivation issues and work as a member of the health care team are covered. Prerequisite: Grade of 2.0 or better in PTA 112 and all PTA courses. (SFCC)

PTA 211 — PTA Procedures V: Rehabilitation Applications (7 cr)
Instructional focus is on application of basic physical therapy skills for the treatment of specific neurologic disabilities including spinal cord injuries, stroke, head injuries, MS and other neurologic diseases. Additional emphasis is placed on the development of treatment programs for orthopedic patients including upper and lower extremity dysfunctions, injuries to the spine, and lower extremity amputations. Students develop specific home programs, instruct in family training, and select appropriate assistive devices and equipment for neurologic, geriatric and orthopedic patients. Students apply physical therapy skills for the comprehensive treatment of the geriatric patient, vestibular and burn patients, and analyze functional assessments and testing for sensory related deficits. Prerequisite: Grade of 2.0 or better in PTA 210 and all PTA courses and concurrent enrollment in PTA 201, 252. (SFCC)

PTA 212 — PTA Procedures VI (4 cr)
Instruction is provided in normal and abnormal development, pediatric treatment philosophies and principles, pediatric assessment tools, gross motor skill development, behavior management and communication skills, and common pediatric disorders. Laboratory sessions focus on facilitation of developmental sequence, common treatment approaches including handling, positioning, range of motion, strength and mobility. Prerequisite: Grade of 2.0 or better in previous PTA courses and concurrent enrollment in PTA 202, 210, 251, 254. (SFCC)

PTA 251 — Clinical Experience II (1 cr)
Supervised clinical experience in varied physical therapy sites affiliated with the college. Students are expected to continue to develop skills in basic patient care, documentation, modalities and functional activities which have been previously evaluated in the laboratory setting. Prerequisite: Grade of 2.0 or better in all previous PTA courses and concurrent enrollment in PTA 202, 210, 212, 254. (SFCC)

PTA 252 — Clinical Experience III (3 cr)
Supervised clinical experience in varied physical therapy sites affiliated with the college. Students are expected to continue to develop skills in basic patient care, documentation, modalities and functional activities which have been previously evaluated in the laboratory setting. Prerequisite: Grade of 2.0 or better in previous PTA courses and concurrent enrollment in PTA 201, 211, 255. (SFCC)

PTA 253 — PTA Clinical Affiliation (12 cr)
This is a full-time internship of practical performance and appropriate application of physical therapy procedures and techniques under supervision in two selected clinic settings or a physical therapy department associated with the college. This affiliation is sufficient to insure the student has reached the minimum level of competency required for an entry-level physical therapist assistant in the application of physical therapy procedures and the understanding of clinic responsibilities and supervisory relationships prior to graduation. Grading option: Pass/fail. Prerequisite: Grade of 2.0 or better in all PTA courses or permission of instructor. (SFCC)

PTA 254 — Clinical Seminar II (1 cr)
Clinical lecture and discussion seminar will focus on cultural competence and verbal and written communication with clients and the health care team. Prerequisite: Grade of 2.0 or better in previous PTA courses and concurrent enrollment in PTA 202, 210, 212, 251. (SFCC)

PTA 255 — Clinical Seminar III (1 cr)
Survey of issues surrounding patient care and teamwork. Topics will focus on patient interaction, adjustment to disability and grief, ethics, and physical therapist and physical therapist assistant roles and responsibilities. Prerequisite: Grade of 2.0 or better in previous PTA courses and concurrent enrollment in PTA 201, 211, 252. (SFCC)

PHYSICS

PHYS 100 — Introductory Physics (5 cr)
This course is intended for nonscience majors to provide exposure to the culture of physics-its history, principles, laws, recent developments and societal impacts. Math is minimal, and weekly laboratory study is required. (SCC, SFCC)

PHYS 101 — General Physics (5 cr)
This course is for science and other majors not requiring calculus-level physics. There is an emphasis on mechanics, Newton's Laws of Motion, rotation motion and conservation principles. This course also requires a weekly laboratory. Prerequisite: 2.0 or better in one of the following MATH courses: MATH& 141, 142, 151, 152, 153, 254, MATH 220, 225, 274. (SCC, SFCC)

PHYS 102 — General Physics (5 cr)
For science and other majors not requiring calculus-level physics. Emphasis on wave motion optics, thermodynamics and fluids. Requires weekly laboratory. Prerequisite: PHYS 101. (SCC, SFCC)

PHYS 103 — General Physics (5 cr)
For science and other majors not requiring calculus-level physics. Emphasis on electricity, magnetism, relativity and quantum physics. Requires weekly laboratory. Prerequisite: PHYS 101. (SCC, SFCC)

PHYS 120 — Fundamentals of Medical Physics (5 cr)
This course emphasizes applications of physics in the health science areas for cardiopulmonary and echocardiographic instrumentation. Topics covered include mechanics, fluid statics (Archimedes' and Pascal's Principles), molecular phenomena related to biological processes, elasticity and wave motion, physics of sonographic imaging, and instruments. Prerequisite: MATH 099 or equivalent; PHYS 100 or high school physics. Enrollment is limited to invasive or noninvasive cardiovascular technology students. (SCC)

PHYS 121 — Medical Physics II (4 cr)
Advanced applications in medical physics and instrumentation are emphasized in this course. Topics include pressure and energy of flowing fluids in the circulatory system with various medical applications of Poiseuille's Law, Bernoulli Effect, Venturi Effect; AC and DC electric circuits; instrumentation, and safety issues; applications using LASERs; light, nuclear radiation; and other topics in modern physics. Other topics may include Magnetic Resonance Imaging (MRI), Near Infrared (NIR) spectroscopy, Ocular Coherence Tomography (OCT), or Positron Emission Tomography (PET). Prerequisite: PHYS 120 and enrolled in an invasive or noninvasive cardiovascular technology program. (SCC)

PHYS 201 — Engineering Physics I (5 cr)
Calculus-level classical physics with emphasis on mechanics. This course is for engineering and physical science majors transferring to four-year institutions. Topics include kinematics, dynamics, gravity, momentum and energy. A weekly laboratory is required. Prerequisite: PHYS 100 or one year of high school physics and MATH& 152 and concurrent enrollment in MATH& 153. (SFCC)

PHYS 202 — Engineering Physics II (5 cr)
Calculus-level classical electricity and magnetism for physical science and engineering majors. Topics include AC and DC circuits, Gauss' Law, Kirchhoff's Laws and Maxwell's equations. A weekly laboratory is required. Prerequisite: PHYS 201 and MATH& 153. (SFCC)

PHYS 203 — Engineering Physics III (5 cr)
Calculus-level classical thermodynamics and wave mechanics for physical science and engineering majors. Topics include laws of thermodynamics, thermal properties of matter, mechanical waves, sound and light. A weekly laboratory is required. Prerequisite: MATH& 153 and PHYS 201. (SFCC)

POLITICAL SCIENCE

POLS& 101 — Intro to Political Science (5 cr)
Development of Western political theory and ideology, comparative analysis of contemporary ideologies, examination of political processes with emphasis on the individual's role. Prerequisite: SFCC recommended minimum reading placement score: COMPASS 80, ASSET 40. (SCC, SFCC)

POLS 102 — Comparative Government (5 cr)
This is an introductory, interdisciplinary course designed to introduce students to the systematic study of comparative political systems. In an increasingly interdependent world, this course provides students with the conceptual and analytical tools to study political behavior, institutions and processes of various countries across the globe. (SCC)

POLS 125 — Introduction to Global Issues (5 cr)
This is an introductory, multidisciplinary course designed to introduce the student to pertinent global issues. A goal of this course is to foster and promote understanding, attitudes and skills that enables citizenry in local communities to function humanely in an age of global interdependence. Prerequisite: SFCC recommended minimum reading placement score: COMPASS 80, ASSET 40. (SCC, SFCC)

POLS& 202 — American Government (5 cr)
The basic course develops an understanding of American politics and political institutions, the philosophies and concepts of American constitutionalism, and the structure and operation of the American form of government. Emphasis is placed on the theories and practice of democracy, pluralism and elitism. Prerequisite: SFCC recommended minimum reading placement score: COMPASS 80, ASSET 40. (SCC, SFCC)

POLS& 203 — International Relations (5 cr)
A broad survey of the relations of nations: Political, military, economic and cultural, and of the forces for order in the international world. Prerequisite: SFCC recommended minimum reading placement score: COMPASS 80, ASSET 40. (SCC, SFCC)

POLS 204 — Political Philosophy (5 cr)
This is an introduction to the basic theories behind political philosophy. Areas of emphasis includes government, state of nature, authority and legitimacy. (SCC)

POLS 205 — Islam and the West: Theater of Cooperation and Conflict (5 cr)
This introductory, multidisciplinary course introduces students to the systematic study of Islam and the West in world politics. Conceptional and analytical tools to study Global Islam are provided. Prerequisite: SFCC recommended minimum reading placement score: COMPASS 80, ASSET 40. (SCC, SFCC)

POLS 280 — Introduction to Modern British Government and Social Services (3 cr)
A two-week introduction to British cultural, economic and political institutions in their historical context. Prerequisite: Only for students in England for the Service Learning in England program. (SFCC)

PSYCHOLOGY

PSYC& 100 — General Psychology (5 cr)
A general survey of the following areas of psychology: Physiology, sensation/perception, cognition/memory, motivation, learning, development, social, intelligence, personality, mental health and scientific method. Prerequisite: SFCC recommended minimum reading placement score: COMPASS 80, ASSET 40. (SCC, SFCC)

PSYC& 200 — Lifespan Psychology (5 cr)
A survey of human development from conception through late adulthood. Physical, emotional, cognitive and psychosocial development will be explored. Prerequisite: Must have passed PSYC& 100 with a 2.0 or better within the last five years or permission of instructor. (SCC, SFCC)

PSYC 204 — Research Methods in Social Science (5 cr)
The study of the basic data, theory, methodology and attitudes of the social scientist independent of any special area. Prerequisite: PSYC& 100 or SOC& 101. (SCC, SFCC)

PSYC 210 — Conception through Adolescent Developmental Psychology (5 cr)
A survey of human development focusing on the physical, mental and emotional/social growth processes from conception through adolescence. Other topics include the history and principles of developmental psychology, childhood education and parenting. Prerequisite: Must have passed PSYC& 100 with a 2.0 or better within the last five years or permission of instructor. SFCC recommended minimum reading placement score: COMPASS 80, ASSET 40. (SCC, SFCC)

PSYC& 220 — Abnormal Psychology (5 cr)
An introduction to the diagnosis, classification, research and theoretical concepts relating to abnormal and deviant behavior. Prerequisite: PSYC& 100 with a 2.0 or better within the last five years or permission of instructor. (SCC, SFCC)

PSYC 250 — Psychology of Adjustment (5 cr)
Human behavioral, mental and emotional experience are described and analyzed in the context of mental health and psychological growth, with emphasis on issues and problems of personal development and interpersonal relationships. Prerequisite: Must have passed PSYC& 100 with a 2.0 or better within the last five years or permission of instructor. (SCC, SFCC)

RADIOLOGY TECHNOLOGY

RAD 111 — Radiographic Positioning I (5 cr)
This course reviews specific anatomy as it appears on x-ray images such as chest and abdomen, upper and lower limbs, shoulder and pelvic girdles, and vertebral column systems. Students learn positional techniques used to take appropriate radiographs of each body part based on the physician's request. Correct alignment of radiographic equipment is emphasized. Exposure factors, patient apprehension, safety and comfort are addressed. (SCC)

RAD 112 — Medical Terminology for Radiology I (1 cr)
This course introduces medical terms and standard medical abbreviations. The language of medicine as it relates to radiology is emphasized. Logical methods for word formations, pronunciation, pluralization and spelling of medical terms are presented. (SCC)

RAD 113 — Patient Care and Ethics I (2 cr)
Students learn the necessary skills for meeting the physical and emotional needs of the patient. Patient preparation required to perform a radiographic examination is emphasized. (SCC)

RAD 114 — Radiographic Image Evaluation I (2 cr)
This course introduces essential technical factors used to evaluate radiographic quality including collimation, shielding, positioning, anatomical anomalies, density, contrast and film artifacts in the developed radiograph. Types of images being evaluated build as students' knowledge of positioning grows. (SCC)

RAD 115 — Fuch's Radiographic Principles I (3 cr)
This course introduces various forms of imaging. Students learn the basic principles of radiographic exposure, formulation of techniques and purpose, and the use of accessories such as grids, screens, collimators, filters and the x-ray tube. (SCC)

RAD 116 — Clinical Education I (8 cr)
Students learn radiographic positioning, darkroom and office procedures, patient management and critical analysis of radiographs in a clinical setting. Students develop psychomotor skills, cognitive domain and affective behavior in the science of radiographic technology. (SCC)

RAD 121 — Radiographic Positioning II (3 cr)
This course reviews the anatomy of each body part and system such as GI, Urinary, respiratory, bony thorax, and reproductive. Students learn positional techniques used to take appropriate radiographs of each body part or system based on the physician's request. Correct alignment of the image receptor and x-ray tube is emphasized. Exposure factors, patient apprehension, safety and comfort are covered. Prerequisite: RAD 111. (SCC)

RAD 122 — Medical Terminology for Radiology II (1 cr)
This course continues with the concepts introduced in RAD 112. Students' medical vocabulary is expanded to include medical vernacular pertaining to the positioning class topics. Prerequisite: RAD 112. (SCC)

RAD 123 — Patient Care and Ethics II (2 cr)
This course continues with the concepts introduced in RAD 113. Students learn the necessary skills for meeting the physical and emotional needs of the patient. Patient preparation required to perform a radiographic examination is emphasized. Potential situations that may lead to litigation are covered. Students also learn to protect themselves and the patient. Prerequisite: RAD 113. (SCC)

RAD 124 — Radiographic Image Evaluation II (2 cr)
Students build on the skills introduced in RAD 114 and develop radiographic assessment skills based on technical factors such as collimation, shielding, positioning, anatomical anomalies, density, contrast and image artifacts. Prerequisite: RAD 114. (SCC)

RAD 125 — Fuch's Radiographic Principles II (3 cr)
This course continues with the concepts introduced in RAD 115. Students learn about radiation protection and use of protective devices. Film and film holders are emphasized. Students learn about radiation processing chemicals, darkroom design and care are emphasized. Prerequisite: RAD 115. (SCC)

RAD 126 — Clinical Education II (9 cr)
Students learn radiographic positioning, darkroom and office procedures, patient management and critical analysis of radiographs in a clinical setting. Students continue to develop psychomotor skills, cognitive domain and affective behavior in the science of radiographic technology. Prerequisite: RAD 116. (SCC)

RAD 127 — Mobile/Surgical Procedures (1 cr)
This course reviews common mobile/surgical procedures using positional techniques to take appropriate radiographs of each body part based on the physician's request. Students review correct alignment of radiographic equipment, exposure factors, patient apprehension, safety and comfort. (SCC)

RAD 131 — Radiographic Positioning III (2 cr)
Students review the anatomy of the skull and facial bones and positional techniques utilized to take appropriate radiographs based on the physician's request. Correct alignment of image, anatomy and x-ray tube are emphasized. Students prepare for comprehensive tests. Prerequisite: RAD 121. (SCC)

RAD 132 — Radiation Physics (2 cr)
This course reviews principles and concepts of scientific measurement, molecular theory, matter and energy, and electricity, magnetism and circuitry. Particular emphasis is placed on imaging modalities, x-ray circuitry, and the principles and production of x-rays. (SCC)

RAD 134 — Radiographic Image Evaluation III (2 cr)
Students continue to develop radiographic assessment skills based on technical factors such as collimation, shielding, positioning, anatomical anomalies, density, contrast and image artfacts. Prerequisite: RAD 124. (SCC)

RAD 136 — Clinical Education III (9 cr)
This course continues with the development of clinical skills introduced in RAD 126. Prerequisite: RAD 126. (SCC)

RAD 141 — Radiographic Positioning IV (2 cr)
This course is a review of specific anatomy as it appears on x-ray images such as nervous, biliary arthrography and tomography systems. Students learn positional techniques used to take appropriate radiographs of each body part based on the physician's request. Correct alignment of radiographic equipment is emphasized. Exposure factors, patient apprehension, safety and comfort are addressed. Prerequisite: RAD 131. (SCC)

RAD 144 — Radiographic Image Evaluation IV (1 cr)
Students continue to develop radiographic assessment skills based on technical factors such as collimation, shielding, positioning, anatomical anomalies, density, contrast and image artifacts. Prerequisite: RAD 134. (SCC)

RAD 145 — Fuch's Radiographic Principles III (2 cr)
This course continues with the concepts introduced in RAD 125. Students learn about computerized and digital imaging, while radiation protection is emphasized. Prerequisite: RAD 125. (SCC)

RAD 146 — Clinical Education IV (8 cr)
This course continues with the development of clinical skills introduced in RAD 136. Prerequisite: RAD 136. (SCC)

RAD 156 — Clinical Education X (1-7 cr)
Students learn radiographic clinical cat scan procedures. (SCC)

RAD 157 — Clinical Education XI (1-7 cr)
Students learn radiographic clinical cat scan procedures. (SCC)

RAD 211 — Radiographic Positioning V (1 cr)
This course is a review of specific anatomy as it appears on x-ray images such as chest and abdomen, upper and lower limbs, shoulder and pelvic girdles, bony thorax, vertebral column and gastrointestinal systems. Students learn positional techniques used to take appropriate radiographs of each body part based on the physician's request. Correct alignment of radiographic equipment is emphasized. Exposure factors, patient apprehension, safety and comfort are addressed. Prerequisite: RAD 141. (SCC)

RAD 212 — Quality Management (1 cr)
This course introduces quality assurance programs and techniques used in film quality evaluation, processing and x-ray instrumentation. Students study the theory and practical application of quality assurance. (SCC)

RAD 213 — Various Modalities (2 cr)
This course introduces the elements of ultrasound technology principles, nuclear medicine, mammography, radiation therapy, magnetic resonance imaging (MRI) and other special procedures. Principles of interventional and angiographic procedures, angiographic equipment and visualized anatomy are addressed. History of development, application and image presentation also are presented. The scope of medical imaging techniques and their correlation is emphasized. (SCC)

RAD 214 — Radiographic Image Evaluation V (2 cr)
This course introduces essential technical factors used to evaluate radiographic quality including collimation, shielding, positioning, anatomical anomalies and density, contrast, and film artifacts in the developed radiograph. Types of images being evaluated build as the students' knowledge of positioning grows. Prerequisite: RAD 134. (SCC)

RAD 215 — Radiation Biology and Protection (2 cr)
This course introduces the effects of ionizing radiation on biologic tissue. An overview of pertinent pathological diseases is presented, and the concepts of radiation protection is discussed and emphasized. (SCC)

RAD 216 — Clinical Education V (9 cr)
This course continues with the development of clinical skills introduced in RAD 146. Prerequisite: RAD 146. (SCC)

RAD 223 — Radiation Pathology (2 cr)
A radiologist discusses disease processes, anomalies and technical factors related to properly completed radiographs. (SCC)

RAD 224 — Radiographic Image Evaluation VI (2 cr)
This course introduces essential technical factors used to evaluate radiographic quality including collimation, shielding, positioning, anatomical anomalies and density, contrast, and film artifacts in the developed radiograph. Types of images being evaluated build as the students' knowledge of positioning grows. Prerequisite: RAD 214. (SCC)

RAD 225 — Skull and GI Review (1 cr)
This course reviews the positional techniques utilized when taking radiographs of the skull and GI system based on the physician's request. (SCC)

RAD 226 — Clinical Education VI (9 cr)
This course continues with the development of clinical skills introduced in RAD 216. Prerequisite: RAD 216. (SCC)

RAD 235 — Pharmacology/Venipuncture (1 cr)
Students learn safe administration of pharmaceuticals including clinical experience in needle placement. Needle insertion and contrast media injection, and principles of pharmacological agents used in a radiology department are emphasized. (SCC)

RAD 236 — Clinical Education VII (9 cr)
This course continues with the development of clinical skills introduced in RAD 226. Prerequisite: RAD 226. (SCC)

RAD 237 — Review and Registration Preparation (3 cr)
Students review all the material covered in previous radiology technology courses in preparation of the ARRT examination which may be taken on or after the day of graduation from the program. (SCC)

RAD 238 — Cat Scan (1 cr)
Course content is designed to provide entry-level radiography students with principles related to computed tomography (CT) imaging. This course includes instruction on the history, various components, operations and processes applied in CT. The students will also be instructed on the appropriate radiation protection that should be utilized. (SCC)

RESPIRATORY CARE

RT 110 — Physical Science for Respiratory Care (3 cr)
This introductory course applies physical sciences to cardiopulmonary physiology, respiratory care equipment and operation, and application of physical laws to mechanical and physiological measurements. Prerequisite: Admission in program. (SCC)

RT 111 — Respiratory Care Fundamentals I (3 cr)
This is the first in a series of four-quarter courses introducing respiratory care fundamentals. Students learn the respiratory care profession, cover pulmonary anatomy and physiology, patient assessment, respiratory disease states, fundamentals of oxygen theory, and cardiopulmonary resuscitation. Prerequisite: Admission in program. (SCC)

RT 112 — Pharmacology and Medical Terminology I (1 cr)
This is first in a series of three courses on pharmacology and medical terminology. General pharmacological principles, drug classification, computations, routes of deliver and respiratory medications are emphasized. Word construction, definitions and use of terms related to medical science, hospital service and allied health specialties are covered. Prerequisite: Admission in program. (SCC)

RT 120 — Respiratory Care Fundamentals II (4 cr)
This is the second in a series of four-quarter courses introducing respiratory care fundamentals. Arterial blood gas interpretations, humidity and aerosol therapy, oxygen analyzer, pulse oximetry, airway maintenance and secretion management, patient assessment, and manual resuscitation are emphasized. Work ethics and professionalism also are covered. A CPR instructor course is included. Prerequisite: Completion of previous quarter. (SCC)

RT 130 — Fundamentals of Spirometry and Blood Gas Analysis (3 cr)
This is first in a series of three courses applying the technique of spirometry and blood gas analysis in the diagnosis of cardiopulmonary dysfunction. Prerequisite: Completion of previous quarter. (SCC)

RT 131 — Cardiopulmonary Anatomy and Physiology (1 cr)
This course introduces cardiopulmonary anatomy and physiology. The structure and function of the cardiopulmonary system are emphasized. Prerequisite: Completion of previous quarter. (SCC)

RT 132 — Respiratory Care Fundamentals III (4 cr)
This is the third in a series of four-quarter courses introducing respiratory care fundamentals. Hyperinflation therapy, chest physiotherapy, introduction to positive pressure ventilators, a seven-hour special unit on AIDS related education, as required by state law, and infection control are emphasized. Prerequisite: Completion of previous quarter. (SCC)

RT 133 — Pharmacology and Medical Terminology II (3 cr)
This course is second in a series of three on pharmacology dealing with principles of mucolytics, antiasthmatics, antimicrobials, anti-inflammatory agents, surface-active and special applications. The medical terminology portion includes laboratory assessment values associated with the cardiopulmonary system. A written report on a specific drug is required. Prerequisite: Completion of previous quarter. (SCC)

RT 134 — Respiratory Care Clinical I (1 cr)
Students observe the role of the respiratory care practitioner in the acute care environment while applying didactic and psychomotor skills at the bedside during administration of fundamental respiratory care skills. Prerequisite: Completion of previous quarter. (SCC)

RT 140 — Respiratory Care Fundamentals IV (2 cr)
This is the final course in a series of four covering the psychosocial stages of development from infant to geriatrics, a foundation describing the unique requirements of the pediatric patient and pediatric disorders, and the classification, theory and operation of adult acute care ventilators. Prerequisite: Completion of previous quarter. (SCC)

RT 141 — Medical/Surgical Respiratory Care (1 cr)
This is an overview course of the medical/surgical problems related to respiratory disease, including the etiology, course therapy and prognosis. Prerequisite: Completion of previous quarter. (SCC)

RT 142 — Computer Applications for Respiratory Care (1 cr)
This course introduces fundamental applications of microcomputers, patient management and simulated scenarios. Basic technical writing applied to report preparation, resume writing and cover letters are covered. Prerequisite: Completion of previous quarter. (SCC)

RT 143 — Respiratory Care Clinical II (5 cr)
This course continues with the concepts presented in RT 134 with emphasis on specific therapeutic techniques including oxygen, humidity and aerosol therapy, airway management, hyperinflation, and chest physiotherapy with additional exposure to pediatrics, the surgical environment and the infection control process. Prerequisite: Completion of previous quarter. (SCC)

RT 210 — Critical Care I (6 cr)
This course introduces all aspects of the adult critically ill patient in need of life support systems, including hemodynamic monitoring, cardiopulmonary assessment and ventilator management. Prerequisite: Completion of previous quarter. (SCC)

RT 211 — Advanced Cardiac Life Support (2 cr)
This is the third in a series of cardiopulmonary pharmacology and advance cardiac life support courses. Content areas include the principles and techniques of advanced emergency cardiac care. Prerequisite: Completion of previous quarter. (SCC)

RT 212 — Respiratory Care Clinical III (5 cr)
This course continues with the concepts presented in RT 143 with emphasis on the critically ill adult patient. Team management skills, maintenance and withdrawal of life support, cardiopulmonary assessment, and hemodynamic monitoring are emphasized. Prerequisite: Completion of previous quarter. (SCC)

RT 213 — Pulmonary Volumes, Diffusion and Instrumentation (3 cr)
This advanced course introduces pulmonary diagnostics relating to measurement and assessment of flow volume loops, lung volumes, distribution and diffusion. Prerequisite: Completion of previous quarter. (SCC)

RT 214 — Pulmonary Diagnostics Clinical I (1 cr)
Students assist in the evaluation of patients with pulmonary disease including pulmonary function testing and arterial blood gas analysis in hospital and private practice laboratories. Prerequisite: Completion of previous quarter. (SCC)

RT 215 — Cardiopulmonary Pathophysiology (1 cr)
The pathophysiology of cardiopulmonary diseases including obstructive, restrictive, vascular and lung injuries are presented in this course. Prerequisite: Completion of previous quarter. (SCC)

RT 220 — Critical Care II (5 cr)
This course continues with the concepts in RT 210 emphasizing advanced mechanical ventilator applications and nonconventional approaches to patient management in critical care settings with an introduction to the sub-acute, skilled nursing, home and rural areas. Interviewing skills and job market analysis are presented. Prerequisite: Completion of previous quarter. (SCC)

RT 221 — Perinatal Respiratory Care (3 cr)
This course emphasizes pediatric and neonatal respiratory care dealing with the pathophysiology, disease status and assessment of the newborn and pediatric patients including therapeutic procedures, resuscitation and mechanical ventilation. Literature review leading to written reports and oral discussion of current and advanced developments also is included. Prerequisite: Completion of previous quarter. (SCC)

RT 222 — Respiratory Care Clinical IV (4 cr)
This course continues with the concepts presented in RT 212 with the addition of pediatric and neonatal intensive care settings and an observation in an alternative site. Students observe and assist in patient assessment with pulmonogist and the program's medical director. Prerequisite: Completion of previous quarter. (SCC)

RT 223 — Advanced Pulmonary Diagnostics (4 cr)
This course introduces specialized diagnostic procedures including radiographic, bronchoscopies, polysomnography, pulmonary stress testing and exercise physiology. Prerequisite: Completion of previous quarter. (SCC)

RT 224 — Advanced Pulmonary Diagnostics Clinical II (1 cr)
This course continues with the applications introduced in RT 214. Students assist in the evaluation of patients with pulmonary disease and disorders in hospital and private practice laboratories including the sleep lab, bedside and outpatient bronchoscopy, and pulmonary stress testing. Prerequisite: Completion of previous quarter. (SCC)

RT 230 — Current Trends in Respiratory Care (2 cr)
This course explores current concepts in respiratory care and health care delivery with student presentations and discussions of cardiopulmonary patient case studies involving diagnostic and therapeutic modalities. Prerequisite: Completion of previous quarter. (SCC)

RT 231 — Patient Management and Problem Solving (3 cr)
This course introduces the application of respiratory care practices and procedures leading to patient problem solving including computer applications with clinical simulations based on entry and advanced national board exams. Prerequisite: Completion of previous quarter. (SCC)

RT 232 — Sub-Acute/Rehabilitation Respiratory Care (2 cr)
This course introduces the application of principles of respiratory care to patients being managed in sub-acute, extended and skilled nursing facilities, rural and home care. Smoking cessation and wellness concepts are shared with the local community. Prerequisite: Completion of previous quarter. (SCC)

RT 233 — Fundamentals of Management in Health Care (2 cr)
This course introduces organizational structure, job descriptions and evaluation, employee benefits, reimbursement, budgeting, scheduling, and other management skills required for employment in the heath care industry. Prerequisite: Completion of previous quarter. (SCC)

RT 234 — Respiratory Care Clinical V (5 cr)
Students transition from student practice to that of a respiratory care practitioner. Added clinical practice in the sub-acute, home care and optional rural environments is offered. Prerequisite: Completion of previous quarter. (SCC)

RUSSIAN

RUSS& 121 — Russian I (5 cr)
This course prepares students to be proficient in Russian sound and writing systems, to cary on a conversation in Russian using everyday vocabulary, and to discuss routine, daily activities. (SCC, SFCC)

RUSS& 122 — Russian II (5 cr)
This course prepares students to be proficient in Russian sound and writing systems, to carry on a conversation in Russian using everyday vocabulary, and to discuss routine, daily activities. Prerequisite: RUSS& 121 is required. (SCC, SFCC)

RUSS& 123 — Russian III (5 cr)
This course prepares students to be proficient in Russian sound and writing systems, to carry on a conversation in Russian using everyday vocabulary, and to discuss routine, daily activities. Prerequisite: RUSS& 122 is required. (SCC, SFCC)

SALISH

SAL 101 — Salish I (5 cr)
Interior Salish Language and Culture focuses on Nselxcin language traditionally spoken by the Aboriginal people of North Central and Eastern Washington and Southern British Columbia. Students learn to speak and understand basic Salish and are introduced to the International Phonetic Alphabet. The course consists of a variety of communicative lessons, each with a core vocabulary, phrases and usage information. Course materials are supplemented with songs, traditional stories and other cultural teachings. (SCC, SFCC)

SAL 102 — Salish II (5 cr)
A continuation of Salish 101, this course, focuses on Nselxcin language traditionally spoken by the Aboriginal people of North Central and Eastern Washington and Southern British Columbia. Students learn to speak and understand basic Salish and are introduced to the International Phonetic Alphabet. The course consists of communicative lessons, each with a core vocabulary, phrases and usage information. Course materials are supplemented with songs, traditional stories and other cultural teachings. Prerequisite: SAL 101. (SCC, SFCC)

SAL 103 — Salish III (5 cr)
Students use the foundation of language acquired in Salish 101 and 102 in order to study and memorize traditional plateau stories written and recorded in the Nselxcin language. This Interior Salish Language and Culture course focuses on Nselxcin language traditionally spoken by the Aboriginal people of North Central and Eastern Washington and Southern British Columbia. In Salish 103 Students increase their proficiency in reading and writing using the International Phonetic Alphabet. The course consists of a variety of literature lessons, each with a core vocabulary and narrative phrases, as well as usage and grammatical information. Course materials are supplemented with songs and other cultural teachings. Prerequisite: SAL 101, 102. (SCC, SFCC)

SMALL BUSINESS MANAGEMENT

SBM 101 — How to Start a Small Business (5 cr)
This course offers an interesting and realistic look at the scope and trends of small business, the role and future of small business in our economy, and the advantages and disadvantages of owning a business. The main causes for business failure and success, the importance of preparing a business plan, and resources that are available to help the small business owner succeed also are addressed. The class is based on current information and hands-on participation by the student. (SCC-telecourse only) (SCC, SFCC)

SBM 105 — Targeting Your Market (2 cr)
Introduces students to marketing by examining marketing problems facing the small business owner today. Helps the small business owner better understand how to afford marketing research, select a great location, determine methods of pricing goods and services for profit, and understand customer buying habits. (SFCC)

SOCIAL SERVICES

HSSOC 115 — Social Policy (5 cr)
This is an introductory course that is policy-oriented. It attempts to instill systematic habits of analysis and inquiry that will increase students' awareness and objectivity. The focus is on current issues and problems in social work. (SFCC)

HSSOC 176 — Counseling Techniques (5 cr)
Various approaches to the treatment of chemical dependency are addressed in this course. Students are exposed to basic counseling skills, strategies employed in chemical dependency treatment, counseling techniques used in addressing treatment needs, and techniques used for removing blocks to recovery. Specific techniques are demonstrated and practiced that are appropriate for a variety of populations suffering from chemical dependency. (SFCC)

HSSOC 221 — Treatment Theories in Human Services (5 cr)
Concepts, theories and practices regarding social work treatment are covered in this course. Focus is on the constructs, underlying principles, theories, practices and desired outcomes of several contemporary treatment modalities. Prerequisite: HSSUB 176. (SFCC)

HSSOC 279 — Case Management (3 cr)
This course prepares students to function effectively as case managers in state-approved chemical dependency treatment programs. It includes detailed instruction in a systemized, uniform problem-oriented recording system approved by DASA, as well as methods and strategies employed in intervention, assessment, intake, treatment planning and case supervision in a variety of treatment settings. (SFCC)

SOCIOLOGY

SOC& 101 — Intro to Sociology (5 cr)
Basic concepts and theories of sociology with an emphasis on the group aspects of human behavior. Prerequisite: SFCC recommended minimum reading placement score: COMPASS 80, ASSET 40. (SCC, SFCC)

SOC& 201 — Social Problems (5 cr)
Social problems have existed in societies throughout time. We live in an increasingly connected world where the social problems experienced in one nation are influenced by events in other parts of the world. This class explores social problems in the U.S. as well as examines social problems on a global scale. Topics covered include: Globalization, world economy and world poverty, human rights, population growth and environmental destruction, race and gender, crime, war and terrorism. Prerequisite: SFCC recommended minimum reading placement score: COMPASS 80, ASSET 40. (SCC, SFCC)

SOC 204 — Research Methods in Social Science (5 cr)
The study of the basic data, theory, methodology and attitudes of the social scientist independent of any special area. Prerequisite: PSYC& 100 or SOC& 101. (SCC, SFCC)

SOC 211 — Marriage and the Family (5 cr)
A sociological analysis of the institution of the family including historical and cross-cultural variations of the family structure and mate selection processes; the modern family institution with regard to the sexual, reproductive, economic and socialization function; newly emerging lifestyles, alternate living patterns, family disorganization, and changing definitions of family. Prerequisite: SFCC recommended minimum reading placement score: COMPASS 80, ASSET 40. (SCC, SFCC)

SOC 221 — Race and Ethnic Relations (5 cr)
We are a society unprecedented in its diversity of color, class, and cultural origin that reflects the fundamental ethnic and racial composition as well as stratification of the United States population. This class offers a comprehensive examination of race relations that commences with an appreciation of diversity in the United States and seeks to understand these relations through a historically grounded comparative analysis of several dominant/minority global patterns. Prerequisite: SFCC recommended minimum reading placement score: COMPASS 80, ASSET 40. (SCC, SFCC)

SOC 230 — Sociology of Gender (5 cr)
Sociology of Gender examines the changing views of gender in modern society and explores the available research on the social and institutional pressures that shape women and men and their roles in society. This course directly confronts the myths, misconceptions and stereotypes surrounding nearly every aspect of gender, including work, education, sexuality, politics, economics, marriage, family, crime and spirituality. This course also includes a cross-cultural perspective on gender. Prerequisite: SFCC recommended minimum reading placement score: COMPASS 80, ASSET 40. (SFCC)

SOC 250 — Sociology of Religion (5 cr)
A sociological analysis of the individual forces, the cultural systems and the social structures that, in interaction, shape religion and are shaped by it. Establishes a powerful frame of reference to understanding the definition of religion, the functions of religions, aspects of religions and probable future. (SCC)

SOC 261 — Crime and Justice (5 cr)
Explores the phenomenon of crime; considers its causes, theories of prevention and the institutional means employed to combat it, including police, courts and corrections. Crime is interpreted as an American paradox; it is feared and deplored, yet persists and grows. The course examines that paradox by focusing on cultural contradiction in American society regarding crime, justice and punishment. (SCC, SFCC)

SOC 266 — Cooperative Education Seminar (1-2 cr)
For course description, see Cooperative Education. (SCC)

SOC 267 — Cooperative Education Work Experience (1-18 cr)
For course description, see Cooperative Education. (SCC)

SPANISH

SPAN 105 — Spanish for Social Workers (2 cr)
Students are provided with the basic grammar and vocabulary necessary to interpret documents, ask the most frequently asked questions in the social service profession, and to understand the answers to those questions. (SCC)

SPAN 107 — Business Spanish (4 cr)
An introductory course designed for students preparing for a career in business. Upon completion, students are able to handle the most common situations that they encounter in Spain and be familiar with its government, economy and recent history. (SCC)

SPAN& 121 — Spanish I (5 cr)
These courses are an introduction to the Spanish language, traditions and culture using the most modern methods of language learning with emphasis on oral communication. Students complete lab assignments outside of scheduled class times. (SCC, SFCC)

SPAN& 122 — Spanish II (5 cr)
These courses are an introduction to the Spanish language, traditions and culture using the most modern methods of language learning with emphasis on oral communication. Students complete lab assignments outside of scheduled class times. Prerequisite: SPAN& 121 or permission of instructor. (SCC, SFCC)

SPAN& 123 — Spanish III (5 cr)
These courses are an introduction to the Spanish language, traditions and culture using the most modern methods of language learning with emphasis on oral communication. Students complete lab assignments outside of scheduled class times. Prerequisite: SPAN& 122 or permission of instructor. (SCC, SFCC)

SPAN& 221 — Spanish IV (5 cr)
Intensive review plus emphasis on Spanish culture and the idiomatic usage of the language, both oral and written. Prerequisite: Two years of high school Spanish or one complete year of college Spanish or permission of instructor. (SCC, SFCC)

SPAN& 222 — Spanish V (5 cr)
This course places emphasis on the composition and discussion of contemporary and cultural issues, with increasingly difficult idioms and structural concepts. Prerequisite: SPAN& 221 or permission of instructor. (SCC, SFCC)

SPAN& 223 — Spanish VI (5 cr)
This course places continued emphasis on the composition and discussion of contemporary issues as well as Hispanic and Latin American culture, with increasingly difficult vocabulary and structural concepts. Prerequisite: SPAN& 221, 222 or permission of instructor. (SCC, SFCC)

SPAN 241 — Spanish Conversation and Culture (2 cr)
Students increase their vocabulary, improve their speaking ability, and gain more confidence in using previously studied grammatical concepts. Conducted in Spanish. Prerequisite: Two years of college-level Spanish (SPAN& 223) or equivalent. (SCC, SFCC)

SPAN 242 — Spanish Conversation and Culture (2 cr)
Students continue to develop their fluency in Spanish by participating in small group discussions that focus on a wide variety of topics in Hispanic culture. Conducted in Spanish. May be taken without SPAN 241 as a prerequisite. Prerequisite: Two years of college-level Spanish (SPAN& 223) or equivalent. (SCC, SFCC)

SPAN 266 — Cooperative Education Seminar (1-2 cr)
For course description, see Cooperative Education. (SCC)

SPAN 267 — Cooperative Education Work Experience (1-18 cr)
For course description, see Cooperative Education. (SCC, SFCC)

SURGICAL TECHNOLOGY

SURG 100 — Introduction to Surgical Technology (2 cr)
This course introduces the roles of the surgical technologist emphasizing the surgical environmental and procedural safety concerns. (SCC)

SURG 101 — Surgical Procedures (5 cr)
This course is an introduction to the knowledge and techniques essential to the surgical technologist in preparation of the patient for major or minor surgical procedures. Expertise in preparation/utilization of equipment and supplies, sterilization/disinfection, aseptic techniques, robotics, and duties of the surgical technologist and assistant circulator are emphasized. Health care provider CPR is included. Prerequisite: HED 125, SURG 100, 120. (SCC)

SURG 104 — Central Service Clinical (1 cr)
This clinical rotation allows students the opportunity to develop performance competencies appropriate to central service units. (SCC)

SURG 105 — Blood-borne Pathogens and HIV/AIDS (1 cr)
Students are introduced to current information on blood-borne pathogens with an emphasis on HIV/AIDS education utilizing the 7-hour Washington State curriculum. This course is offered online only. (SCC)

SURG 107 — Surgical Environment (3 cr)
Students learn the skills required for the physical environment (working condition) of the operating room. Understanding the basic patient and staff safety issues are emphasized. Prerequisite: Successful completion of first quarter coursework and concurrent enrollment in HED 125, SURG 100. (SCC)

SURG 111 — Technical Skills I (4 cr)
This course provides practical applications for performing the duties of a circulating assistant and scrub technician in a simulated operating room. Duties include patient preparation, equipment and supplies preparation, instrumentation, sterilization/disinfection practices, and aseptic techniques. Prerequisite: Concurrent enrollment in SURG 101. (SCC)

SURG 120 — Disease Transmission and Control (3 cr)
This course introduces students to basic microbiology theory including discussion of pathogenic microorganisms. Methods of transmission, identification of microorganisms in the operating room, and growth control and practices in the operating room are emphasized. (SCC)

SURG 202 — Surgical Procedures (6 cr)
This course continues with the concepts introduced in SURG 101 with emphasis on advanced preparation and utilization of electrical equipment and lasers. Supplies necessary for specific specialties and various surgical procedures are included. Prerequisite: SURG 101 and concurrent enrollment in SURG 212, 254. (SCC)

SURG 203 — Surgical Procedures (4 cr)
This course continues with the concepts introduced in SURG 202 with emphasis on advanced preparation and utilization of equipment. Supplies necessary for specific advanced specialties and various surgical procedures are included. An introduction of physics is presented. Prerequisite: SURG 202, 212 and concurrent enrollment in SURG 206, 255. (SCC)

SURG 206 — Perioperative Care of the Patient (4 cr)
Students learn the skills required for preoperative, intraoperative and postoperative phases of the surgical patient. Understanding the patient's pharmacologic, ethical, anesthetic, wound healing and other related nursing needs are emphasized. Prerequisite: Successful completion of fourth-quarter coursework and concurrent enrollment in SURG 203, 255. (SCC)

SURG 212 — Technical Skills II (4 cr)
This course continues with the applications introduced in SURG 111. Duties include patient preparation, equipment and supplies preparation, sterilizing practices, and disinfection and aseptic techniques. Prerequisite: Successful completion of SURG 101, 111 and concurrent enrollment in SURG 202. (SCC)

SURG 250 — Surgical Seminar (3 cr)
This weekly conference is based on discussion from the students' operating room experience in the form of case studies. Students also review for preparation for the national certification test. Prerequisite: SURG 255. (SCC)

SURG 254 — Operating Room Practicum (2 cr)
This course provides surgical technology students with actual experience in the operating room. In this pre-arranged practicum, students learn teamwork, flexibility, organization, and economy in time, motion and materials. Preparation of all supplies and equipment used for surgical procedures in the operation room is included. Prerequisite: SURG 101, 104, 111 and concurrent enrollment in SURG 202, 212. (SCC)

SURG 255 — Operating Room Practicum (5 cr)
This course provides surgical technology students with actual experience in the operating room. In this pre-arranged practicum, students learn teamwork, flexibility, organization, and economy in time, motion and materials. Preparation of all supplies and equipment used for surgical procedures in the operation room is included. First and second scrubbing procedures under the supervision of operating room personnel or instructor are emphasized. Prerequisite: SURG 202, 212, 254 and concurrent enrollment in SURG 203, 206. (SCC)

SURG 256 — Operating Room Practicum (10 cr)
Students gain clinical experience in affiliated hospital operating rooms assisting the circulator, and shadowing anesthesia and maternity technicians. Prerequisite: SURG 203, 206, 255 and concurrent enrollment in SURG 250. (SCC)

VASCULAR TECHNOLOGY

VASC 100 — Introduction to Echo and Vascular (2 cr)
Introduction to the field of Echocardiography and Vascular Technology with emphasis on the role of these career pathways. Stresses the importance of professionalism, ethical behavior, and communications. Career opportunities, Credentialing, Program and Health Science student handbooks will be reviewed. Prerequisite: Admission to the program and concurrent enrollment in VASC 112, 125. (SCC)

VASC 112 — Vascular Fundamentals (4 cr)
This course is an introduction to basic vascular anatomy of the lower and upper extremities, abdomen, visceral organs and cerebral vasculature with emphasis on the physiology of these systems. An introduction to the concepts essential for the performance and interpretation of vascular exams is also included. Laboratory experience is required. (SCC)

VASC 122 — Vascular Procedures I (4 cr)
This course introduces students to the basic vascular procedures used to assess the lower and upper extremities, abdomen, visceral organs and cerebral vascalature with emphasis on the ultrasonic examinations of these systems. Instrumentation commonly used in the vascular laboratory is also presented. Laboratory experience is required. Prerequisite: Admission to the program and concurrent enrollment in VASC 135. (SCC)

VASC 123 — Hemodynamics (2 cr)
Introduction to various forms of invasive monitoring. Emphasis is placed on the basics of hemodynamic monitoring and interpretation. Normal and pathologic examples are introduced. (SCC)

VASC 125 — Ultrasound Physics and Instrumentation I (5 cr)
This course emphasizes ultrasound physics, the physics of waves, sound transmission, attenuation, pulse wave principles, transducer and ultrasound systems operations. Prerequisite: Admission to the program and concurrent enrollment in VASC 100, 112. (SCC)

VASC 126 — Technical Skills/Reading Hemodynamics (1 cr)
Introduction to various forms of invasive monitoring. Emphasis is placed on the basics of hemodynamic monitoring and interpretation. Normal and pathologic examples are introduced. Supports concepts taught in ICT 125. Prerequisite: Permission of instructor. (SCC)

VASC 131 — Core Concepts in Vasc (2 cr)
The core concepts in cardiac and vascular imaging will be explored. Applications of blood flow and hemodynamic analysis using Doppler and imaging technologies. Review of current literature and standards documents will be conducted. Prerequisite: Admission to the program and concurrent enrollment in VASC 132, 133, 138. (SCC)

VASC 132 — Vascular Procedures II (5 cr)
This course is an advanced study of normal cardiovascular physiology and the effects of pathology. It is presented in a series of physician lecture and lab demonstrations with applications in vascular, invasive and noninvasive cardiology. Prerequisite: Admission to the program and concurrent enrollment in VASC 131, 133, 138. (SCC)

VASC 133 — ECHO Fundamentals (5 cr)
Introduction to the basic principles and application of the Doppler and echocardiographic procedures. The anatomy, image assessment, hemodynamics and clinical applications of cardiac ultrasound are emphasized. Laboratory experiences are provided. Prerequisite: Admission to the program and concurrent enrollment in VASC 131, 132, 138. (SCC)

VASC 135 — Ultrasound Physics and Instrumentation II (5 cr)
This course is a continuation of the concepts introduced in VASC 125. Ultrasound physics emphasizes the Doppler techniques, artifacts, bio utilizing instrumentation to investigate the principles of Doppler techniques and artifacts. Prerequisite: Admission to the program and concurrent enrollment in VASC 122. (SCC)

VASC 138 — Cardiovascular Physiology (4 cr)
This course is an advanced study of normal cardiovascular physiology presented in a series of physician lectures and lab demonstrations with applications in invasive and noninvasive cardiology. Prerequisite: BIOL& 241, 242. Admission to the program and concurrent enrollment in VASC 131, 132, 133. (SCC)

VASC 139 — Surgical Asepsis (1 cr)
Surgical asepsis for health care providers. This class will prepare the student to create a sterile field. Gown and glove themselves and others. Procedural awareness of working in a sterile field will be developed. Prerequisite: Enrollment in ICT program or permission of instructor. (SCC)

VASC 140 — Technical Skills/Surgical Asepsis (1 cr)
This class supports ICT 140. The skills of surgical asepsis and infection control are taught. Working in a sterile field and gowning and gloving are taught. Develop a surgical conscience. Prerequisite: Enrollment in ICT program or permission of instructor. (SCC)

VASC 141 — Data Collection and Presentation (3 cr)
Students explore applications in medicine and develop the ability to use the microprocessor for word processing database management and statistical analysis. Principles of statistics are reviewed and applied through database management. Prerequisite: Admission to the program and concurrent enrollment in VASC 143, 144. (SCC)

VASC 142 — Survey of Diagnostic Medical Sonography (3 cr)
A survey of basic diagnostic medical sonography with an emphasis on normal abdominal and superficial structures anatomy and abnormal disease states. Standard sonographic imaging techniques of abdomen and superficial structures, instrumentation and examination protocols will be reviewed. Laboratory experience is required. Prerequisite: Admission to the program. (SCC)

VASC 143 — Vascular Screening Simulation (4 cr)
Students are introduced to the clinical environment by spending four weeks in the clinical setting under the direction of a staff technologist. Weekly clinical seminars are conducted with SCC staff. A clinical consciousness is developed that emphasizes professionalism, clinical rapport, medical ethics and patient care. Prerequisite: Admission to the program and concurrent enrollment in VASC 141, 144. (SCC)

VASC 144 — Vascular Screening Seminar (2 cr)
Vascular screening seminar will be conducted weekly to discuss cases presented during the vascular screening procedures performed. A clinical consciousness will be developed with emphasis on professionalism, clinical rapport, medical ethics and patient care. Prerequisite: Admission to the program and concurrent enrollment in VASC 141, 143. (SCC)

VASC 251 — Vascular Technical Skills (4 cr)
The student will develop intermediate to advanced skills in performing all vascular technology examinations, including cerebrovascular, peripheral arterial, peripheral venous and visceral/abdominal vascular examinations, in a clinical simulation format. Emphasis is placed on new developments and specialty applications as well as development of the essential skills in the performance of all vascular technology imaging techniques. All procedures are performed under the supervision of credentialed vascular technologists. Prerequisite: Admission to the program. (SCC)

VASC 252 — Advanced Vascular Techniques (7 cr)
This course uses the fundamentals presented in the first year of vascular technology to evaluate acquired vascular disease states. The incorporation of all forms of vascular testing performance and interpretation of ultrasonic, Doppler and plethysmographic examinations are presented. Related physician lectures and laboratory experiences are provided. (SCC)

VASC 253 — Vascular Clinical I (2 cr)
Students obtain advanced hands-on experience in hospital and clinical environments. Development of clinical technique in the utilization of current echocardiographic instrumentation in the evaluation of acquired cardiovascular disease is emphasized. Students apply the principles of medical legal ethics and professionalism to the patient, physician and other members of the health team. Clinical case reports are required. Prerequisite: Admission to the program and concurrent enrollment in VASC 252. (SCC)

VASC 254 — Vascular Clinical Preparation (2 cr)
Students review all course materials in the first year with application on the clinical setting. Students develop skill at identification of both normal and abnormal images. Course is aligned with technical skills laboratory experience to allow students to develop clinical skills prior to assignment in a clinical setting. Prerequisite: Admission to the program. (SCC)

VASC 262 — Vascular Clinical II (14 cr)
Students practice clinical skills previously developed through active participation in a vascular laboratory. This course is a full-time clinical internship and is completed in an affiliated local or out-of-town hospital, clinic, or physician's office. Emphasis of this course is on the clinical skills necessary for the performance and evaluation of the vascular procedures. Written reports, review of current literature and attendance at conferences are required. Prerequisite: Admission to the program. (SCC)

VASC 272 — Vascular Clinical III (14 cr)
This course is a continuation of VASC 262 and includes a full-time clinical internship and is completed in an affiliated local or out-of-town hospital, clinic, or physician's office. Emphasis of this course is on the clinical skills necessary for the performance and evaluation of the vascular procedures. Written reports, review of the current literature and attendance at conferences are required. Prerequisite: Admission to the program. (SCC)

VASC 299 — Independent Studies in Vascular Technology (1-13 cr)
This course is designed for students wishing to complete specialized studies in the field of vascular technology. Objectives are developed jointly by the student and instructor. Credit hours are assigned according to the length of time required to complete the objectives. Credits are agreed upon at the time of enrollment. Students complete specialized clinical internships in pediatric echocardiography, color flow mapping or vascular technology. Prerequisite: Current enrollment or graduate of Vascular Technology, or permission of instructor. (SCC)

WATER RESOURCES TECHNOLOGY

WATER 109 — Introduction to Water Resources (5 cr)
This course introduces the fundamentals of field hydrology and the various components of the hydrologic cycle with an emphasis on runoff and hydrologic measurements, basic computational techniques, and water rights doctrines. (SCC)

WATER 110 — Hydrogeology (5 cr)
Students study the basic geologic framework and hydrology of aquifers. Geologic factors such rock type, structure, geomorphology and geologic environments are introduced. Groundwater terminology, basic principles of groundwater flow, practical application of geologic maps and aerial photos, and basic computational skills are emphasized. (SCC)

WATER 111 — Groundwater Systems (5 cr)
Students review the principles of groundwater flow. Hydrologic parameters associated with confined and unconfined aquifers are introduced. Interpretation of well log data as a tool for understanding aquifers is presented. Quantitative and qualitative groundwater resource problems are discussed. Practical applications and basic computational skills are emphasized. (SCC)

WATER 120 — Hydrologic Technical and Field Reports (5 cr)
This course introduces the fundamental techniques of gathering, organizing and presenting technical hydrologic information in written and verbal form. Research of employment opportunities and various job descriptions particular to the water resources career field is conducted. Students learn to complete job application forms and resumes. (SCC)

WATER 128 — Occupational Preparation and Experience (1-10 cr)
This practical course assists students in pursuing careers in water resources. Students learn to complete employment applications, resumes and employment portfolios. Faculty assist students in making employer contacts, interviewing and follow-up. Students are required to evaluate their work experiences and submit comprehensive written and oral reports. (SCC)

WATER 129 — Occupational Preparation and Experience (1-10 cr)
This practical course assists students in pursuing careers in water resources. Students learn to complete employment applications, resumes and employment portfolios. Faculty assist students in making employer contacts, interviewing and follow-up. Students are required to evaluate their work experiences and submit comprehensive written and oral reports. (SCC)

WATER 131, 132, 133, 231, 232, 233 — Hydrologic Field Projects (1-3 cr ea)
This course provides practical experience that allows students to gain additional knowledge in a special topic of interest in water resource management. Guidance from the water resource instructors is provided to help students maximize their projects. (SCC)

WATER 135 — Pumps, Pipes, Hydrants, and Valves (3 cr)
Introduction to common pumps, pipes, hydrants, and valves used in water and waste water operations. (SCC)

WATER 205 — Surveying (5 cr)
This course introduces principles of operation of levels, transits, theodolites and electronic measuring devices. Computational techniques are emphasized. Prerequisite: NATRS 122. (SCC)

WATER 206 — Basic Mechanical Maintenance and Repair (3 cr)
Introduction to basic mechanical maintenance and repair procedures commonly used in water and waste water operations. (SCC)

WATER 207 — Weather and Climate (5 cr)
This course introduces the descriptive treatment of meteorological and climatological phenomena including winds, weather fronts, air masses, clouds, temperature and precipitation. Basic computations, weather map analysis, forecasting and instrumentation techniques are emphasized. (SCC)

WATER 208 — Water Data and Records Analysis (5 cr)
Students learn basic computation and tabulation techniques, diagrammatic presentation and interpretation of hydrologic data. Analyzing water level recorder charts and state-discharge relationships are emphasized. Students learn basic computer processing of records. (SCC)

WATER 209 — Water Quality (5 cr)
This course introduces geologic and drainage basin characteristics. Students learn how man's influence through management activities impact water quality, timing and quantity of flow. Students study ecologic characteristics from a limnological viewpoint combining aspects of water quality and biology. Water quality field sampling and laboratory procedures are practiced. (SCC)

WATER 210 — Hydrologic Measurement (5 cr)
This course offers practical experience in the fundamentals of streamflow measurement with emphasis on discharge and stage monitoring. The use, care and maintenance of various instruments and equipment are stressed. (SCC)

WATER 211 — Water and Wastewater Regulations (3 cr)
An introduction to federal, state, and tribal water quality regulations pertaining to water and waste water operations. (SCC)

WATER 212 — Water Rights and Laws (5 cr)
Students to gain a basic understanding of the water rights doctrines and learn practical applications in water management. Water quality regulations that govern the use of water in the western states is emphasized such as the Clean Water Act, Washington State Forest Protection Act and Spokane County regulations. (SCC)

WATER 213 — Advanced Water Quality (5 cr)
This course emphasizes basic techniques of field water quality monitoring and sampling. Laboratory analyses of field samples are conducted with a follow-up of data interpretation and recommendations. (SCC)

WATER 214 — Advanced Hydrologic Records (5 cr)
Students gain practical experience and develop skills in streamflow measurements, records management and surveying. Instrument and equipment maintenance are emphasized. Various standard computational techniques such as data processing and spread sheets are introduced. (SCC)

WATER 215 — Construction Inspection and Management (3 cr)
Introduction to planning, coordinating, and inspecting construction practices and related procedures in water and waste water operations. (SCC)

WATER 216 — Watershed Restoration (5 cr)
Students are given the opportunity to analyze stream corridor processes and characteristics and then apply this knowledge in a final restoration project. (SCC)

WATER 218 — Hazardous Materials (3 cr)
Students study hazardous materials regulations, terminology, identification systems, shipping and storage containers, incident command systems and basic analysis, information resources, chemical protective clothing, and decontamination. This course meets the requirements for the 40-hour certificate. (SCC)

WATER 219 — Hazardous Materials Educational Refresher (1 cr)
This is an annual refresher course that meets the requirements for the EPA hazardous materials certification. Prerequisite: WATER 218 or possess a hazardous materials 40-hour certificate. (SCC)

WATER 228 — Occupational Preparation and Experience (1-10 cr)
This practical course assists students in pursuing careers in water resources. Students learn to complete employment applications, resumes and employment portfolios. Faculty assist students in making employer contacts, interviewing and follow-up. Students are required to evaluate their work experiences and submit comprehensive written and oral reports. (SCC)

WATER 229 — Occupational Preparation and Experience (1-10 cr)
This practical course assists students in pursuing careers in water resources. Students learn to complete employment applications, resumes and employment portfolios. Faculty assist students in making employer contacts, interviewing and follow-up. Students are required to evaluate their work experiences and submit comprehensive written and oral reports. (SCC)

WATER 266 — Cooperative Education Seminar (1-2 cr)
For course description, see Cooperative Education. (SCC)

WATER 267 — Cooperative Education Work Experience (1-18 cr)
For course description, see Cooperative Education. (SCC)

WATER 288 — Cooperative Education Work Experience (No Seminar) (1-18 cr)
For course description, see Cooperative Education. (SCC)

WELDING AND FABRICATION

WELD 104 — Welding and Fabrication Basics (5 cr)
Students learn the basic concepts of welding and fabrication. (SCC)

WELD 113 — Welding Math (2 cr)
This course introduces theory and practical application utilizing formulas to solve problems encountered in the fabrication industry. Prerequisite: Concurrent enrollment in WELD 114, 115, 116, 117 or permission of instructor. (SCC)

WELD 114 — Introduction to Blueprint Reading (3 cr)
This course introduces students to blueprint reading. Structural shapes, conventional and auxiliary views, sections, and welding joints are emphasized. Prerequisite: Concurrent enrollment in WELD 113, 115, 116, 117 or permission of instructor. (SCC)

WELD 115 — Introduction to Fabrication (2 cr)
This course introduces tools, equipment and materials used in the layout and fabrication of a variety of welding projects with emphasis on their functions and proper use. Welding shop safety procedures are stressed. Prerequisite: Concurrent enrollment in WELD 113, 114, 116, 117 or permission of instructor. (SCC)

WELD 116 — Shielded Metal Arc Welding Theory (3 cr)
This course introduces shielded metal arc welding theory. Welding safety and positions, equipment setup, striking an arc, and cutting operations are emphasized. Prerequisite: Concurrent enrollment in WELD 113, 114, 115, 117 or permission of instructor. (SCC)

WELD 117 — Shielded Metal Arc Welding Applications (1-7 cr)
This course offers practical lab experience utilizing the concepts introduced in WELD 116. The selection and application of welding electrodes to specific weld joints are emphasized. Prerequisite: Concurrent enrollment in WELD 113, 114, 115, 116 or permission of instructor. (SCC)

WELD 123 — Intermediate Blueprint Reading (2 cr)
This course continues the concepts introduced in WELD 114. The interpretation of blueprints and corresponding welding symbols are emphasized. Prerequisite: Concurrent enrollment in WELD 124, 125, 126 or permission of instructor. (SCC)

WELD 124 — Advanced Shielded Metal Arc Welding Theory (2 cr)
This course continues the concepts introduced in WELD 116. Welding metallurgy, electrode classifications, and the uses of carbon and alloy steels are introduced. Prerequisite: Concurrent enrollment in WELD 123, 125, 126 or permission of instructor. (SCC)

WELD 125 — Advanced Shielded Metal Arc Welding Applications (6 cr)
This course provides advanced lab experience of the theory introduced in WELD 124. Welding practices used when working with carbon and alloy steels are emphasized. Prerequisite: Concurrent enrollment in WELD 123, 124, 126 or permission of instructor. (SCC)

WELD 126 — Intermediate Fabrication (5 cr)
This course offers practical lab experience using the skills acquired in the first quarter theory and lab courses. Layout and fabrication of a variety of welding projects are emphasized. Prerequisite: Concurrent enrollment in WELD 123, 124, 125 or permission of instructor. (SCC)

WELD 133 — Advanced Blueprint Reading (2 cr)
This course continues the concepts introduced in WELD 114 and 123 with emphasis on the interpretation of complex working drawings applying design, layout and sequence of fabrication factors. Prerequisite: Concurrent enrollment in WELD 134, 135, 136 or permission of instructor. (SCC)

WELD 134 — Specialty Welding Theory (3 cr)
This course introduces metallurgy and other welding processes such as gas tungsten arc welding, gas metal arc welding and flux core arc welding. Prerequisite: Concurrent enrollment in WELD 133, 135, 136 or permission of instructor. (SCC)

WELD 135 — Specialty Welding Applications (8 cr)
This course offers practical applications in equipment setup and operational procedures used in a variety of welding processes. Safety considerations and X-ray quality welding are emphasized. Prerequisite: Concurrent enrollment in WELD 133, 134, 136 or permission of instructor. (SCC)

WELD 136 — Advanced Fabrication (2 cr)
This course offers practical applications in the layout and fabrication of metal projects utilizing the appropriate welding processes and fabrication equipment. Prerequisite: Concurrent enrollment in WELD 133, 134, 135 or permission of instructor. (SCC)

WELD 165 — Oxy-Acetylene Welding (1 cr)
Students are trained in the selection and use of oxy-acetylene welding and cutting equipment and supplies to perform basic maintenance, repair and construction jobs encountered in various mechanical fields. Prerequisite: Permission of instructor. (SCC)

WELD 168 — Arc Welding (1 cr)
Students are trained in the selection and use of arc welding equipment and supplies to perform basic maintenance, repair and construction jobs encountered in various mechanical fields. Prerequisite: Permission of instructor. (SCC)

WELD 266 — Cooperative Education Seminar (1-2 cr)
For course description, see Cooperative Education. (SCC)

WELD 267 — Cooperative Education Work Experience (1-18 cr)
For course description, see Cooperative Education. (SCC)

WOMENS STUDIES

WS 201 — Women of Our World (5 cr)
This course embarks on a global journey that seeks awareness of how women from around the world live and work. Students explore the differences and similarities in the social expectations of American women and women from around the world. Topics include but are not limited to the work of women in other cultures, reproductive rights and realities of women in other cultures, motherhood and homemaking in other cultures, and equality between women and men in other cultures. (SCC)

ZOOLOGY

ZOOL 121 — Invertebrate Zoology (5 cr)
Basic structure of animals, comprehensive survey of invertebrate phyla, anatomy and ecological relationships. Meets A.A. degree lab science requirement. Prerequisite: BIOL& 160. (SCC, SFCC)

ZOOL 122 — Vertebrate Zoology (5 cr)
Anatomy, physiology, evolution and ecology of fish, amphibians, reptiles, birds and mammals. Meets A.A. degree lab science requirement. Prerequisite: BIOL& 160. (SCC, SFCC)

Program / Course Abbreviations

ABF	AUTOMOTIVE COLLISION AND REFINISHING TECHNICIAN
ACCT	ACCOUNTING
AGGEN	AGRICULTURE, GENERAL
AGHRT	AGRICULTURE/HORTICULTURE
AIRC	HEATING, VENTILATION, AIR CONDITIONING AND REFRIGERATION
AIRSC	AVIATION/AIRWAY SCIENCE
ANTH	ANTHROPOLOGY
APLED	APPLIED EDUCATION
AQUAT	AQUATICS
ARCFT	AVIATION MAINTENANCE TECHNOLOGY
ARCHT	ARCHITECTURAL TECHNOLOGY
ART	ART
ASL	AMERICAN SIGN LANGUAGE
ASTR	ASTRONOMY
AUDIO	AUDIO ENGINEERING
AUTO	AUTOMOTIVE TECHNOLOGY
BAK	BAKING: PROFESSIONAL PASTRIES AND SPECIALTY CAKES
BIOEQ	BIOMEDICAL EQUIPMENT TECHNICIAN
BIOL	BIOLOGY
BOT	BOTANY
BT	BUSINESS TECHNOLOGY
BUS	BUSINESS, GENERAL
CAD	CAD COMPUTER AIDED DESIGN AND DRAFTING
CAPPS	COMPUTING-COMPUTER APPLICATIONS
CARP	CARPENTRY AND CABINETRY
CATT	COMPUTER APPLICATION TECHNOLOGY TRAINING
CET	CIVIL ENGINEERING TECHNOLOGY
CHEM	CHEMISTRY
CHIN	CHINESE
CIS	COMPUTER INFORMATION SYSTEMS
CJ	CRIMINAL JUSTICE
CMST	COMMUNICATION STUDIES
COOP	COOPERATIVE EDUCATION
COS	COSMETOLOGY
CRMGT	CREDIT AND FINANCIAL MANAGEMENT
CS	COMPUTING-COMPUTER SCIENCE
CUL	CULINARY ARTS
DENT	DENTAL ASSISTING
DRMA	DRAMA
ECED	EARLY CHILDHOOD EDUCATION
ECHO	ECHOCARDIOGRAPHY
ECON	ECONOMICS
EDUC	EDUCATION/EDUCATION PARAPROFESSIONAL, SPECIAL EDUCATION
ELECT	ELECTRONICS ENGINEERING TECHNICIAN
ELMT	ELECTRICAL MAINTENANCE AND AUTOMATION
EMS	EMERGENCY MEDICAL SERVICES
ENGL	ENGLISH
ENGR	ENGINEERING
ENVS	ENVIRONMENTAL SCIENCES
FLPT	HYDRAULIC AND PNEUMATIC AUTOMATION TECHNICIAN
FMDSE	FASHION MERCHANDISING
FMT	HEALTH/FITNESS TECHNICIAN
FOD	FIRE OFFICER
FRCH	FRENCH
FS	FIRE SCIENCE TECHNOLOGY
FSCI	FUNDAMENTALS OF SCIENCE
GENST	GENERAL STUDIES
GEOG	GEOGRAPHY
GEOL	GEOLOGY
GERM	GERMAN
GOVT	GOVERNMENT, STUDENT
GRDSN	GRAPHIC DESIGN
GUID	GUIDANCE
HED	HEALTH EDUCATION
HEQ	DIESEL/HEAVY DUTY EQUIPMENT
HIIM	HEALTH INFORMATICS
HIS	HEARING INSTRUMENT SPECIALIST
HIST	HISTORY
HIT	HEALTH INFORMATION TECHNOLOGY
HLTH	HEALTH
HM	HOTEL AND RESTAURANT MANAGEMENT
HS	HUMAN SERVICES
HSGER	GERONTOLOGY PARAPROFESSIONAL
HSSOC	SOCIAL SERVICES
HSSUB	CHEMICAL DEPENDENCY PROFESSIONAL STUDIES
HUC	HEALTH UNIT COORDINATOR
HUM	HUMANITIES
IBE	INTEGRATED BUSINESS AND ENTREPRENEURSHIP PROGRAM
ICT	INVASIVE CARDIOVASCULAR TECHNOLOGY
INTDS	INTERIOR DESIGN
IS	COMPUTING-INFORMATION SYSTEMS
ITP	INTERPRETER TRAINING PROGRAM
JAPN	JAPANESE
JOURN	JOURNALISM
LA	PARALEGAL
LINE	LINE CONSTRUCTION
LMLIB	LIBRARY AND INFORMATION SERVICES
LSEC	LEGAL ADMINISTRATIVE ASSISTANT
MA	MEDICAL ASSISTANT
MACH	MACHINIST/CNC TECHNOLOGY
MATH	MATHEMATICS
MET	MECHANICAL ENGINEERING TECHNOLOGY
MILSC	MILITARY SCIENCE
MMGT	MANAGEMENT
MSEC	MEDICAL OFFICE SPECIALIST
MUSC	MUSIC
NATRS	NATURAL RESOURCE MANAGEMENT
NCT	NONINVASIVE CARDIOVASCULAR TECHNOLOGY
NURS	NURSING PROGRAM (R.N., L.P.N.)
NUTRI	NUTRITION
OCEA	OCEANOGRAPHY
OR-PR	ORTHOTIC-PROSTHETIC TECHNICIAN
OTA	OCCUPATIONAL THERAPY ASSISTANT
PALEO	PALEONTOLOGY
PE	PHYSICAL EDUCATION
PHARM	PHARMACY TECHNICIAN
PHIL	PHILOSOPHY
PHOTO	PHOTOGRAPHY
PHYS	PHYSICS
POLS	POLITICAL SCIENCE
PSYC	PSYCHOLOGY
PTA	PHYSICAL THERAPIST ASSISTANT
RAD	RADIOLOGY TECHNOLOGY
RT	RESPIRATORY CARE
RUSS	RUSSIAN
SAL	SALISH
SBM	SMALL BUSINESS MANAGEMENT
SOC	SOCIOLOGY
SONO	DIAGNOSTIC MEDICAL SONOGRAPHY
SPAN	SPANISH
SURG	SURGICAL TECHNOLOGY
VASC	VASCULAR TECHNOLOGY
WATER	WATER RESOURCES TECHNOLOGY
WELD	WELDING AND FABRICATION
WS	WOMENS STUDIES
ZOOL	ZOOLOGY