Program/Course Abbreviations

Δ_Ρ	
ARF	AUTOMOTIVE COLUSION AND REEINISHING TECHNICIAN
ACCT	ACCOUNTING
AGGEN	AGRICUITURE, GENERAL
AGHRT	AGRICUITURE/HORTICUITURE
AIRC	HEATING VENTILATION AIR CONDITIONING AND REFRIGERATION
AIRSC	AVIATION/AIRWAY SCIENCE
ANTH	ANTHROPOLOGY
ANTHR	ANTHROPOLOGY Now ANTH
APLED	APPLIED EDUCATION
AOUAT	AQUATICS
ARCFT	AVIATION MAINTENANCE TECHNOLOGY
ARCHT	ARCHITECTURAL TECHNOLOGY
ART	ART
ASL	AMERICAN SIGN LANGUAGE
ASTR	ASTRONOMY
AUDIO	AUDIO TECHNOLOGY
AUTMT	AUTOMOTIVE MACHINIST
AUTO	AUTOMOTIVE TECHNOLOGY
BAK	BAKING: PROFESSIONAL PASTRIES AND SPECIALTY CAKES
BANK	FINANCIAL SERVICES/TELLER
BIOEQ	BIOMEDICAL EQUIPMENT TECHNICIAN
BIOL	BIOLOGY
BIOTC	BIOTECHNOLOGY
BOT	BOTANY
BT	BUSINESS TECHNOLOGY
BUS	BUSINESS
CAPPS	COMPUTING-COMPUTER APPLICATIONS
CARP	CARPENTRY AND CABINETRY
CATT	COMPUTER APPLICATION TECHNOLOGY TRAINING
CET	CIVIL ENGINEERING TECHNOLOGY
CHEM	CHEMISTRY
CHIN	CHINESE
CHINA	- CHINESE Now CHIN
CIS	COMPUTER INFORMATION SYSTEMS
CLACT	
CIVIST	
COOP	
CRMCT	
CS	
CUL	CULINARY ARTS
DENT	DENTAL ASSISTING
DRMA	DRAMA
DRAMA	DRAMA Now DRMA
ECED	EARLY CHILDHOOD EDUCATION
ECOL	ECOLOGY Now ENVS
ECON	ECONOMICS
-ED	EDUCATION/EDUCATION PARAPROFESSIONAL NOW EDUC
EDUC	EDUCATION/EDUCATION PARAPROFESSIONAL
ELECT	ELECTRONICS ENGINEERING TECHNICIAN
ELMT	ELECTRICAL MAINTENANCE AND AUTOMATION
ENG	ENGLISH Now ENGL
ENGL	ENGLISH
ENGR	ENGINEERING
ENVS	ENVIRONMENTAL SCIENCES
ENVSC	ENVIRONMENTAL SCIENCES Now ENVS
FLPT	HYDRAULIC AND PNEUMATIC AUTOMATION TECHNICIAN
FMDSE	FASHION MERCHANDISING
FMT	HEALIH/FIINESS IECHNICIAN
FOD	FIRE OFFICER
FRCH	FRENCH
FRNCH	
F5	
CRUE	
CENICT	CENEDAL STUDIES
GENSI	
GEOG	GEOGRAFITI
GEOL	GERMAN
CEDMM	
GOVT	
0011	
GRDSN	GRAPHIC DESIGN
GRDSN	GOVERNMENT, STODENT GRAPHIC DESIGN GUIDANCE
GRDSN GUID HED	GRAPHIC DESIGN GUIDANCE HEALTH EDUCATION

HEQ	DIESEL/HEAVY DUTY EQUIPMENT
HIS	HEARING INSTRUMENT SPECIALIST
шст	
пы	HISTORY
HIT	HEALTH INFORMATION TECHNOLOGY
HLTH	HFAITH
1184	
HRC	HEALTH RECORD CLERK
HS	HUMAN SERVICES
HSEAK	INTERPRETER TRAINING PROGRAM/DEAFNESS
HSGER	GERONTOLOGY PARAPROFESSIONAL
HSSOC	SOCIAL SERVICES
пээор	CHEINICAL DEPENDENCI PROFESSIONAL STUDIES
HUC	HEALTH UNIT COORDINATOR
ним	HUMANITIES
HUMAN	
IBE	INTEGRATED BUSINESS AND ENTREPRENNEURSHIP
ICT	INVASIVE CARDIOVASCULAR TECHNOLOGY
INITOC	
INTDS	INTERIOR DESIGN
IS	COMPUTING-INFORMATION SYSTEMS
ISFTY	INDUSTRIAL FIRST AID
JAPN	JAPANESE
JAPAN -	JAPANESE Now JAPN
JOURN	JOURNALISM
IA	ΔΛΡΛΙΕCΛΙ
LA	
LIFE	EMERGENCY MEDICAL TECHNICIAN (PARAMEDIC)
LMLIB	LIBRARY TECHNICIAN
ISEC	
LSEC	LEGAL ADIVITINISTRATIVE ASSISTANT
MA	MEDICAL ASSISTANT
MACH	MACHINIST/CNC TECHNOLOGY
MACC	
IVIA55	MASSAGETHERAPY
MATH	MATHEMATICS
MBIOL	MICROBIOLOGY Now BIOL
MACT	
	MECHANICAL ENGINEERING TECHNOLOGT
MILSC	MILITARY SCIENCE
MMGT	MANAGEMENT
MSEC	
WISEC	MEDICAL OFFICE SPECIALIST
MUSC	MUSIC
MUSIC	MUSIC Now MUSC
NATES	NATURAL RESOURCE MANAGEMENT
NAIKS	
NCI	NONINVASIVE CARDIOVASCULAR TECHNOLOGY
NURS	NURSING PROGRAM (R.N., L.P.N.)
NUTRI	NUTRITION
NOTKI OGEA	
OCEA	OCEANOGRAPHY
OCEAN	MARINE BIOLOGY Now OCEA
OF	OCCUPATIONAL EDUCATION
OK-PK	ORTHOTIC-PROSTHETIC TECHNICIAN
PALEO	PALEONTOLOGY
PE	PHYSICAL EDUCATION
FRAKIN	FRANIVACTIECHNICIAN
PHIL	PHILOSOPHY
рното	PHOTOGRAPHY
рнус	PHYSICS
POLC	
POLS	POLITICAL SCIENCE
POLSC	POLITICAL SCIENCE Now POLS
PSYC	PSYCHOLOGY
DCVCU	
ratch	FSICHULUGT NOW PSIC
PTA	PHYSICAL THERAPIST ASSISTANT
RAD	RADIOLOGYTECHNOLOGY
DE	
NE DT	
RT	RESPIRATORY CARE
RUSS	RUSSIAN
	RUSSIAN NOW RUSS
KOJJIN	
SAL	SALISTI
SBM	SMALL BUSINESS MANAGEMENT
SOC	SOCIOLOGY
SONO	
DNDC	
SPAN	SPANISH
SPCH	SPEECH Now CMST
SUDC	
JUKU	
	SURGICALTECHNOLOGY
VASC	SURGICAL TECHNOLOGY VASCULAR TECHNOLOGY
VASC VCT	SURGICAL TECHNOLOGY VASCULAR TECHNOLOGY VISION CARE
VASC VCT WATEP	VASCULAR TECHNOLOGY VASCULAR TECHNOLOGY VISION CARE WATER RESOLIDCES TECHNOLOGY
VASC VCT WATER	SURGICAL TECHNOLOGY VASCULAR TECHNOLOGY VISION CARE WATER RESOURCES TECHNOLOGY
VASC VCT WATER WELD	SURGICAL TECHNOLOGY VASCULAR TECHNOLOGY VISION CARE WATER RESOURCES TECHNOLOGY WELDING AND FABRICATION
VASC VCT WATER WELD WS	SURGICAL TECHNOLOGY VASCULAR TECHNOLOGY VISION CARE WATER RESOURCES TECHNOLOGY WELDING AND FABRICATION WOMENS STUDIES
VASC VCT WATER WELD WS 7001	SURGICAL TECHNOLOGY VASCULAR TECHNOLOGY VISION CARE WATER RESOURCES TECHNOLOGY WELDING AND FABRICATION WOMENS STUDIES ZOQLOGY

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 112 - Excel for Accounting (3 cr)

This course utilizes Excel to solve accounting problems and aid decision making. Areas covered include projection, cash flows, debt management, planning/budgeting and graphical presentation of accounting data. Prerequisite: ACCT 103, 104, CAPPS 112 or permission of instructor. (SFCC)

ACCT 114 – Access for Accounting (2 cr)

This course develops an understanding of the theory and practice of relational database management systems in accounting settings. The course enables students to build accounting system elements for three main accounting transaction cycles: the revenue cycle, the purchase cycle and the payroll cycle. Prerequisite: ACCT 103, 104, CAPPS 114 or permission of instructor. (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. (SFCC)

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 permission of instructor. SFCC: ACCT & 201 (formerly ACCT 101), ACCT 151 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 or permission of instructor and concurrent enrollment in ACCT 162. 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 or permission of instructor and concurrent enrollment in ACCT 161. SFCC: SFCC: ACCT 103 or permission of instructor and concurrent enrollment in ACCT 161. (SCC, SFCC)

ACCT& 201 - Prin of Accounting I (5 cr)

Formerly ACCT 101. 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)

Formerly ACCT 102. 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 (formerly ACCT 101) or permission of instructor. (SCC, SFCC)

ACCT& 203 - Prin of Accounting III (5 cr)

Formerly ACCT 105. 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 (formerly ACCT 101) or permission of instructor. For SFCC - ACCT 202 (formerly ACCT 102) 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 101,151 or permission of instructor. (SCC)

ACCT 212 - Accounting Applications and Analysis (5 cr)

An advanced course with emphasis on applications and analysis using accounting theories and concepts studied in principles and theory courses. Areas covered include funds flow analysis, tax elections, book-tax differences, and statement preparation directly from source documents and incomplete records. Prerequisite: ACCT 151 or ACCT & 202 (formerly ACCT 102). (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. Speakers from the various tax agencies will discuss background, current conditions and benefits relating to their particular tax programs. Prerequisite: ACCT & 201(formerly ACCT 101) or ACCT 51 and 52. (SFCC)

ACCT 220 - Federal Tax Practice (5 cr)

Federal taxation and practice covering the historical background of federal taxation in the U.S.; an overview of the internal revenue code; and detailed analysis and practice in areas of gross income, exclusions, tax accounting, sales, and exchange of property and business deductions will be addressed. (SFCC)

ACCT 266 - Cooperative Education Seminar (1-2 cr)

For course description, see Cooperative Education. (SCC)

ACCT 267 – Cooperative Education Work Experience (1-18 cr)

For course description, see Cooperative Education. (SCC, SFCC)

ACCT 288 – Cooperative Education Work Experience (No Seminar) (1-18 cr)

For course description, see Cooperative Education. (SCC)

AGRICULTURE, GENERAL

AGGEN 150 - Commercial Driver Training (1 cr)

This course provides training to obtain a class A commercial driver's license in the state of Washington with endorsements for tank vehicles and hazardous materials. The course will not provide instruction pertaining to the transportation of passengers (passenger/bus endorsements). (SCC)

AGGEN 151 – Agriculture 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 (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)

AGRICULTURE/HORTICULTURE

AGHRT 100 – Agricultural Plant Biology (5 cr)

This course introduces nonscience majors to the principles of plant biology. Plant diversity, anatomy, morphology, and growth and development are emphasized. (SCC)

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 Application Equipment (5 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 Management (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 (4 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 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 (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 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 119 – Basic Soils (5 cr)

Students are introduced to the various properties of soils as they relate to plant growth. Mineral makeup, organic matter, physical properties, water retention, aeration, temperature, nutrient holding capacity, and how these properties contribute to soil development are emphasized. (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 131 - 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 132 – 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 150 - Agriculture/Horticulture Orientation (1 cr)

An orientation course for all students entering any of the agribusiness, production agriculture or horticulture options. Each option is explored, including requirements, job opportunities and working conditions. Special emphasis is placed on registration procedures. Grading option: Pass/fail. (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 (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 (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 (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 Graphics (4 cr)

This course introduces graphical techniques used in the landscape design profession. Students learn to draw landscape components and complete landscapes by hand and with computer aided drafting (CAD) software. (SCC)

AGHRT 205 – Landscape Design (4 cr)

This course introduces landscape design. Students use processes and principles to design several partial and whole landscapes and develop self confidence while presenting their designs to peers. A history of landscape design and how it has influenced the styles of today is presented. (SCC)

AGHRT 206 – Landscape Construction (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 208 – Basic Landscape Design Lab (2 cr)

Lab techniques of planting design for media presentations on residential sales are emphasized. Prerequisite: AGHRT 204 or concurrent enrollment. (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 218 – Agricultural Marketing (5 cr)

A practical course studying the marketing of agricultural-related products with emphasis on the marketing and merchandising of supplies and services to primary producers and the marketing and merchandising of agricultural products from the primary producer to the end consumer. This study includes marketing terms, principles and costs. The development of a marketing plan and a comparison of the traditional, and as new alternative marketing trends are discussed. (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. Prerequisite: AGHRT 119. (SCC)

See program/course abbreviation key on page 143.

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AGHRT 220 – Agricultural Recordkeeping and Analysis (5 cr)

This is an introduction to the methods of keeping and analyzing financial records with emphasis on double-entry accrual accounting. Areas of emphasis includes the application of basic accounting principles, to small businesses in agriculture and horticulture. (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 223 - Horse Selection, Health and Management (5 cr)

This course introduces students to the development of the different breeds of horses, functional anatomy, nutrition and feeding, reproduction, horse health, and management. (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 100, 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 231 – Agricultural Insects and Diseases (5 cr)

Students study insects, bacteria, fungi, viruses and environmental factors that adversely affect the health of agricultural plants. Emphasis in on problem diagnosis, prevention, identification of causal agent(s), and preparing recommendations for both chemical and cultural control. 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 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 288 — Cooperative Education Work Experience (No Seminar) (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)

Formerly HSEAR 101. Basic manual communication skills including the American manual alphabet-approximately 550 basic signs developing minimum vocabulary and skills for communicating with severely hearing-impaired individuals dependent on this form of communication. Incorporation of body language and facial expression into the use of the sign language, and development of an understanding of the conceptual aspects of the language. (SCC, SFCC)

ASL& 122 – Am Sign Language II (5 cr)

Formerly HSEAR 102. Conversational manual communication and implementation of basic vocabulary, introduction of broader vocabulary and development of conversational skills, vocabulary is presented and practice given. Prerequisite: ASL& 121 (formerly HSEAR 101) or demonstrated competency. (SCC, SFCC)

ASL& 123 – Am Sign Language III (5 cr)

Formerly HSEAR 103. Introduction to meta- and para-language areas of manual communication to more esoteric ideographic signs reflecting usage among different regional dialects. Difficulties of communication with more severely language-deprived deaf individuals are discussed. Prerequisite: ASL& 122 (formerly HSEAR 102) or demonstrated competency. (SCC, SFCC)

ASL 291 – Independent Study (1-5 cr)

Independent Study. (SFCC)

ANTHROPOLOGY

ANTH& 100 – Survey of Anthropology (5 cr)

Formerly ANTHR 101. Introduction to physical anthropology; the study of evolution, fossiI forms and old world archeology. Prerequisite: SFCC required minimum reading placement score: COMPASS 80, ASSET 40. (SCC, SFCC)

ANTH& 206 – Cultural Anthropology (5 cr)

Formerly ANTHR 201. 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)

Formerly ANTHR 204. 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)

Formerly ANTHR 221. 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 091 — Success Strategies for Professional/Technical Students (3-4 cr)

This is an introductory course to the skills needed to succeed in professional/ technical programs. Topics include study skills, reading comprehension, listening strategies, learning styles and an introduction to technical writing. Prerequisite: Current enrollment in a professional/technical program or placement on a professional/technical program waiting list. (SCC)

APLED 112 – Applied Mathematics (3-5 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. (SCC)

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. (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. (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 and 5th or 6th quarter standing. (SCC)

APLED 130 – Civilian Aviation Regulations and Forms (5 cr)

This course offers civilian aviation regulations to current military personnel. It also introduces students to a variety of forms required by civilian aviation as well as advisory circulars, aircraft registration and airmen certification that is unavailable from the military establishment. (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 Assisted Drafting (1-5 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 (2-5 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)

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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)

Formerly ART 107. 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 104 – Perspective Drawing (4 cr)

Students study fundamentals of perspective drawing for the artist and designer. One-, two- and three-point linear perspective; aerial perspective; the effects of light and shadow. (SFCC)

ART 105 – Color and Design (5 cr)

A first-quarter studio class introducing the elements and principles of twodimensional 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 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 111 - Art History (1-15 cr)

A special interest course offered when the opportunity arises; may include field trips and tours in addition to lecture and discussions. (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. Pre-requisite: 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 151 – Calligraphy (3 cr)

Lettering basics including an application of drawn and indicated letter forms, space copy and basic lettering strokes. May be repeated for a total of 6 credits. (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 193 – Lithography (Printmaking) (4 cr)

Students process directly drawn images on Bavarian limestone using wash and line drawing techniques. Color application is possible. The technique is based on the natural antipathy of grease and water. 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 208 — Gallery and Museum Procedures (3 cr)

Arranging exhibits; matting, framing, building sculpture stands or other devices, easels, etc. for display; preparation of posters or other announcements for shows; proper handling of a show and how to acquire traveling exhibits; providing insurance and other necessary accompanying details; proper packing and shipping of traveling shows; and research in innovative ways of exhibiting 2-D and 3-D works. May be repeated for a total of 9 credits. Prerequisite: ART 105 and 5 credits of an academic art (ART& 100 (formerly ART 107), ART 108, 109, 110, 112). (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, SFCC)

ART 267 - Cooperative Education Work Experience (1-18 cr)

For course description, see Cooperative Education. (SCC, SFCC)

ASTRONOMY

ASTR& 100 - Survey of Astronomy (5 cr)

Formerly ASTR 115. This course, offered as a television class, is a survey of astronomy including history, the solar system, stellar evolution and cosmology. 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 ASTR& 101 and 100. This is a physical science course. (SCC, SFCC)

ASTR& 101 – Intro to Astronomy (5 cr)

Formerly ASTR 101. An introductory study of the history and concepts of astronomy including the solar system, stars, galaxies and cosmology. Includes laboratory exercises and student projects. Credit will not be granted for both ASTR& 101 and ASTR& 100 (formerly ASTR 115). (SCC, SFCC)

AUDIO TECHNOLOGY

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 staging, cabling, power distribution, acoustics, equalization, critical listening and mixing, as well as techniques for successful location recording. Prerequisite: AUDIO 117, 155 and concurrent enrollment in AUDIO 118, 120, MUSC 110, 167, 180 (formerly MUSIC 110, 167, 180). (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 118 – MIDI Sequencing I (2 cr)

This course is an introduction to Macintosh Power PC computer software. Students learn to record, arrange and edit MIDI data in a number of ways using Pro Tools MIDI and other current MAC software. Prerequisite: AUDIO 116 or MUSC& 141 (formerly MUSIC 101), AUDIO 117 and concurrent enrollment in AUDIO 120. (SFCC)

AUDIO 119 - MIDI Sequencing II (2 cr)

This course is a continuation of MIDI Sequencing I. Students learn basics of multitrack MIDI recording. Programming in various musical styles is covered, including programming of drums and bass lines. Prerequisite: AUDIO 118, 120 and concurrent enrollment in AUDIO 121. (SFCC)

AUDIO 120 - Digital Audio I (3 cr)

This course is an introduction to digital audio in the MIDI workstation environment. Students learn to record, arrange and edit digital audio data in a number of ways using Pro Tools digital audio software and other current MAC programs. Use of DSP plug-ins is introduced. Prerequisite: AUDIO 117 and concurrent enrollment in AUDIO 118, 156. (SFCC)

AUDIO 121 – Digital Audio II (3 cr)

This course is a continuation of Digital Audio I. Students are introduced to sound editor software for post production on a computer-based workstation. CD and DVD technology are discussed. Prerequisite: AUDIO 118, 120, 156 and concurrent enrollment in AUDIO 119. (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, multi-track recording, compression, gating and mixdown, and receive hands-on recording experience. Prerequisite: Concurrent enrollment in AUDIO 116. (SFCC)

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Students study analog and digital multitrack recording, signal flow, reverb, delay, signal processing, and basic editing. Critical listening and aural skills are applied to specific mixdown techniques. Students plan demo recording projects. Prerequisite: AUDIO 155 and concurrent enrollment in AUDIO 120. (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 (formerly MUSIC 214) and concurrent enrollment in AUDIO 213 and 219 or 255. (SFCC)

AUDIO 206 – Film Scoring (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, 219 and concurrent enrollment in AUDIO 220, 259. (SFCC)

AUDIO 209 – Demo CD Production (4 cr)

Students produce professional quality demonstration CDs from the preplanning stage through recording and mixdown. Course includes intensive hands-on experience as audio technicians and/or performers. Prerequisite: AUDIO 155 or permission of instructor and concurrent enrollment in AU-DIO 156 or permission of instructor. (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 (formerly MUSIC 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 110, 167 (formerly MUSIC 110, 167) and concurrent enrollment in AUDIO 218 and 213 or 255, MUSC 214 (formerly MUSIC 214). (SFCC)

AUDIO 218 – Digital Audio III (5 cr)

This course is a continuation of Digital Audio II, with emphasis on Digital Performer and ProTools applications. Students study Digital Audio processing"plug-ins" for audio effects and musical instruments, as well as ProTools mastering software. Prerequisite: AUDIO 121, 156 and MUSC 167 (formerly MUSIC 167) and concurrent enrollment in AUDIO 217 and 213 or 255, MUSC 214 (formerly MUSIC 214). (SFCC)

AUDIO 219 – Digital Audio IV (5 cr)

Explore music composition and sound design for the video game, animation, and streaming media industries. Produce music for Flash animation and broadcast media with advanced study of Logic, DP5 and ProTools. Prerequisite: AUDIO 218 and 213 or 255 and concurrent enrollment in AUDIO 205, 213 or 255. (SFCC)

AUDIO 220 – Digital Audio V (5 cr)

Students become "power users" on ProTools and DP5 music production software for the Mac computer. The course includes the study of synchronization, file formats, automation and "live" ProTools recording sessions and mixing projects in stereo, and surround sound. Prerequisite: AUDIO 219, 255 and concurrent enrollment in AUDIO 259, 206 or 256. (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, 156, 209 and concurrent enrollment in AUDIO 217, 218, MUSC 214 (formerly MUSIC 214). (SFCC)

AUDIO 256 – Audio Engineering Workshop (5 cr)

Students study analog-digital synchronization while recording and mixing music from a variety of styles and cultures. Topics include advanced signal processing and CD mastering techniques. Prerequisite: AUDIO 219, 255 and concurrent enrollment in AUDIO 220, 259. (SFCC)

AUDIO 259 – Business of Music II (5 cr)

Students explore the numerous career options in Audio Technology, from CD production to live sound to film scoring. Emphasis is on recording studio ownership, including studio design, equipment, budget, taxes, sales, marketing and income opportunities. Students develop a studio business plan and investigate the world of the producer. Prerequisite: AUDIO 113, 156, 159. (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)

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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 MACHINIST

AUTMT 110 – Principles of Engine Operation and Identification (9 cr)

This course is an introduction to the fundamentals of engine operation and core identification with an emphasis on engine disassembly and assembly methods. (SCC)

AUTMT 111 – Engine Disassembly Methods (4 cr)

Students learn practical applications in the disassembly of an engine. Identification of parts and the determination of remachinable core parts are emphasized. (SCC)

AUTMT 112 – Basic Machinery Operation (3 cr)

This course introduces students to machine operations such as connecting rod reconditioning and cylinder boring and honing. Safety requirements utilized while using precision measuring instruments are emphasized. (SCC)

AUTMT 113 – Shop Safety (2 cr)

This course introduces students to safety policy requirements and regulations as they apply to the automotive machine shop. State and federal standards and the shop environment are emphasized. (SCC)

AUTMT 120 – Machinery Setup and Maintenance (7 cr)

This course introduces students to the installation methods and leveling, and procedures required in machinery setup. Maintenance methods and servicing schedules of a variety of equipment are presented. Prerequisite: AUTMT 110, 111, 112, 113. (SCC)

AUTMT 121 - Machinery Setup and Maintenance Applications (8 cr)

Students learn practical applications in the installation, leveling and adjustment of machine shop equipment. Equipment servicing methods also are presented. Prerequisite: AUTMT 110, 111, 112, 113. (SCC)

AUTMT 130 - Principles of Air Flow (8 cr)

This course is an introduction to the theory of camshaft and cylinder head technology from early design to current combustion chambers. Camshaft terminology and applications are emphasized. Prerequisite: AUTMT 120, 121. (SCC)

AUTMT 131 – Air Flow Applications (2 cr)

This course offers practical applications utilizing computer programs to further understand the camshaft, port and combustion chamber principles. Prerequisite: AUTMT 120, 121. (SCC)

AUTMT 132 - Camshaft and Cylinder Head Applications (8 cr)

This course offers practical applications in the testing and rebuilding of cylinder heads. Prerequisite: AUTMT 120, 121. (SCC)

AUTMT 180 - Automotive Machinist Equipment Specialization (2-5 cr)

This course is highly specialized for students currently employed or employed in the automotive machinist industry. Students receive additional training on equipment commonly used in the industry. Students learn to accurately and safely operate any of the following machines to factory authorized specifications: power hone, boring bar and stand, crankshaft regrinder, resurfacer, valve refacer, valve guide and seat head shop, lathes, cylinder hone, line bore and magnaflux. Credits are assigned at the rate of 1 credit for each 22 hours of supervised laboratory experience. (SCC)

AUTMT 210 – Engine Construction (2 cr)

This course offers theory and practical applications of short block construction and internal components. Iron and aluminum castings, forged steel and aluminum parts, and design requirements are emphasized. Prerequisite: AUTMT 130, 131, 132 or permission of instructor. (SCC)

AUTMT 211 – Engine Machining Theory I (6 cr)

This course is an introduction to the study and use of specifications manuals and computer programs as they relate to the automotive machine shop. The proper use of machine shop operations and equipment, equipment safety, and the correct procedures used to restore core parts to factory tolerance are emphasized. Prerequisite: AUTMT 130, 131, 132 or permission of instructor. (SCC)

AUTMT 212 - Engine Machine Applications I (8 cr)

This course offers practical applications in the proper and safe use of automotive machine shop equipment such as rod reconditioners, boring bars and stands, power hones, resurfacers, head shop, valve refacers, seating equipment, pressure testers, and magnaflux. Prerequisite: AUTMT 130, 131, 132 or permission of instructor. (SCC)

AUTMT 220 – Practical Math (2 cr)

This course is an introduction to practical math concepts and their relationship to automotive machine shop management and employees. Utilizing computer programs for math review; profit and loss, and markup and discount; compression ratios and work order calculations are emphasized. Prerequisite: AUTMT 210, 211, 212 or permission of instructor. (SCC)

AUTMT 221 – Engine Machining Theory II (6 cr)

Students study machine shop operations and learn the proper use of equipment used to produce components that meet factory specifications. Prerequisite: AUTMT 210, 211, 212 or permission of instructor. (SCC)

AUTMT 222 - Engine Machining Applications II (8 cr)

This course offers practical applications in the care and proper use of automotive machine shop equipment such as crankshaft regrinders, align bore machinery, engine balancers, CC burrets and engine cleaning equipment. Prerequisite: AUTMT 210, 211, 212 or permission of instructor. (SCC)

AUTMT 230 – Engine Assembly and Testing (3 cr)

Students are introduced to the theories and safe methods used to prepare the machined components for final assembly and testing of parts. Short and long block assembly including seals and sealing, and valve timing and adjustments are emphasized. Prerequisite: AUTMT 220, 221, 222 or permission of instructor. (SCC)

AUTMT 231 – Engine Machining Theory III (6 cr)

Students study cylinder block principles including design, purpose, manufacturing processes and important features. Testing for ASE (Automotive Service Excellence) also is included. Prerequisite: AUTMT 220, 221, 222 or permission of instructor. (SCC)

AUTMT 232 – Engine Machining Applications III (7 cr)

This course offers practical applications in the safe operation of machine shop equipment used to produce factory remanufactured engines. Engine assembly, installation, testing and break-in are emphasized. Prerequisite: AUTMT 220, 221, 222 or permission of instructor. (SCC)

AUTMT 266 — Cooperative Education Seminar (1-2 cr)

For course description, see Cooperative Education. (SCC)

AUTMT 267 – Cooperative Education Work Experience (1-18 cr)

For course description, see Cooperative Education. (SCC)

AUTMT 288 — Cooperative Education Work Experience (No Seminar) (1-18 cr)

For course description, see Cooperative Education. (SCC)

AUTOMOTIVE TECHNOLOGY

AUTO 102 – 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. Prerequisite: Concurrent enrollment in AUTO 103. (SCC)

AUTO 103 – Introduction to Toyota Lab (1 cr)

This course introduces students to the basic Toyota automotive tool system and testing equipment. Prerequisite: Concurrent enrollment in AUTO 102. (SCC)

AUTO 104 – Toyota Internship (2 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 it's 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 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 (2 cr)

The student will learn the Basic techniques of diagnosis of automotive electronic control engines. Prerequisite: Concurrent enrollment in AUTO 106, 107. (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 (2 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 124. (SCC)

AUTO 126 – Toyota Engine Repair Lab (4 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 it's 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)

154 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 (8 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 (8 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 Technology (2 cr)

Students explore the purpose, types of applications, and operation methods pertaining to hybrid service and repair. Prerequisite: Concurrent enrollment in AUTO 218. (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 – Theory of Transmissions (3 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. Prerequisite: Concurrent enrollment in AUTO 219. (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 – Toyota Heating and Air Conditioning Lab (3 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. Prerequisite: Concurrent enrollment in AUTO 225. (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, shortand 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 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 266 — Cooperative Education Seminar (1-2 cr)

For course description, see Cooperative Education. (SCC)

ARCFT 267 – Cooperative Education Work Experience (1-18 cr)

For course description, see Cooperative Education. (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 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 91 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 250 – Advanced Cake Decorating Production (10 cr)

Students use advanced techniques to create, design and decorate wedding and other specialty cakes. Prerequisite: BAK 120, 121, 130, 131, 248 or permission of instructor. (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 140 – Medical Sciences Vocabulary (1 cr)

Formerly A-P 140. A programmed course which teaches the meanings of 300 Latin and Greek word elements used in developing up to 10,000 complex anatomical and medical terms. (SFCC)

BIOL& 160 – General Biology w/Lab (5 cr)

Formerly BIOL 101. 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 233 – Genetics (5 cr)

This course introduces basic principles of inheritance, genomics, proteomics and gene analysis. The significance of the cell cycle events to variation, relationships between genes and physical traits, and genomic relationships between different species are explored. The molecular basis of various genetic analytic techniques is discussed. Prerequisite: BIOL 160 (formerly BIOL 101). (SCC)

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)

Formerly A-P 242. 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 (formerly BIOL 101) or permission of instructor. (SCC, SFCC)

BIOL& 242 - Human A & P 2 (5 cr)

Formerly A-P 243. Continued study of human body structure and function with emphasis on circulatory, respiratory, digestive, urinary, endocrine and reproductive systems. Prerequisite: BIOL& 241(formerly A-P 242). (SCC, SFCC)

BIOL& 260 — Microbiology (5 cr)

Formerly MBIOL 231. 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 (formerly BIOL 101), CHEM 101 recommended. (SCC, 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. (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: BIOEQ 241 and concurrent enrollment in BIOEQ 252. (SCC)

BIOEQ 252 - Biomedical Instrumentation Laboratory (6 cr)

Students receive hands-on experience with circuits and equipment discussed in BIOEQ 251. Prerequisite: Concurrent enrollment in BIOEQ 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)

BIOTECHNOLOGY

BIOTC 120 - Cell Culture Techniques (5 cr)

This course introduces students to aseptic techniques for working with microbiological cultures and mammalian cells. Lecture topics include the origins and maintenance of commonly used cell lines, considerations for working with potentially hazardous cultures, basic requirements for cell cultures, types of selective and specialized media, basic concepts of mammalian cell fermentation, large-scale fermentation, and an introduction to downstream processing of biologics. (SCC)

158 BIOTC 122 – Good Manufacturing Practices (1 cr)

This course explores the regulations which govern the production of drugs, biologics and devices for human use. This is of increasing importance in the biotechnology industry since the US Food and Drug Administration has generally required that products which are eventually used for human diagnostics or treatment must be developed in a GMP environment. Basic concepts of GMP are discussed as well as in-depth exploration of specific regulatory compliance topics such as record keeping, working from standard operating procedures, quality control and validation. (SCC)

BIOTC 129 – Introduction to Protein Chemistry (2 cr)

This course introduces students to the principles of protein analysis and methods used in the biotechnology industry for the isolation and purification of proteins. (SCC)

BIOTC 201 – Scientific Communication (3 cr)

This course presents an in-depth examination of scientific literature and the nature of interaction among scientists, other scientists and the public. Students write a variety of scientific communications, including a prospectus of a hypothesis, a laboratory protocol, a press release, a scientific poster and a review article. Students give oral presentations using their ideas or a scientific experiment which has recently appeared in the literature. Methods for locating quality references on scientific topics are presented, including the advantages and pitfalls of using the Internet for literature research. (SCC)

BIOTC 220 – Instrumental Analysis (1 cr)

This course explores instrumental methods commonly used in biotechnology. Topics include pH and temperature measurements, UV/vis spectrophotometry, gas chromatography, infrared spectroscopy, DNA amplification, and liquid chromatography. (SCC)

BIOTC 240 - Biotechnology Internship (1-5 cr)

Internship projects are determined by the instructor and include a variety of subjects related to current trends in the biotechnology industry, such as development of DNA chip technologies, characterization of biologics, product assembly/testing for area biotech companies and research assistantships at area universities. Prerequisite: Permission of instructor. (SCC)

BIOTC 251 - Recombinant DNA (5 cr)

This course covers the basic theory and methods of molecular biology including DNA isolation, cloning, expression of genes in bacteria, transgenic organisms, gene sequencing and various analytic techniques. (SCC)

BIOTC 261 – Fermentation (5 cr)

This course offers an in-depth examination of microbial fermentation, animal and plant cell culture, and bioprocessing. Topics include a brief history of fermentation, examples and methods of industrial fermentation, product recovery and down-stream processing, and the process of moving from a laboratory scale to an industrial scale culture. (SCC)

BIOTC 289 - Biotechnology Project Internship (1-3 cr)

Internship projects are determined by the instructor and include a variety of subjects related to current trends in the biotechnology industry. This course offers more advanced coursework and lab applications than those found in BIOTC 240. Prerequisite: Permission of instructor. (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 (formerly BIOL 101). (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 (formerly BIOL 101). (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 (formerly BIOL 101) or permission of instructor. (SFCC)

BUSINESS

BUS 100 – Money Management (3 cr)

Formerly GBUS 100. 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)

Formerly GBUS 101. 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)

Formerly GBUS 102. 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)

Formerly GBUS 103. 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)

Formerly GBUS 104. 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 (formerly GBUS 103). (SCC, SFCC)

BUS 105 - Principles of Leadership (3 cr)

Formerly GBUS 105. 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)

Formerly GBUS 107. 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)

Formerly GBUS 108. 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)

Formerly GBUS 109. 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, SFCC)

BUS 110 - Number Skills (1 cr)

Formerly GBUS 110. 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)

Formerly GBUS 111. This class focuses on the important math skills involved in the process of estimating numbers and using the worldwide metric system. Prerequisite: BUS 110 (formerly GBUS 110) or BMC Math Skills Test. (SFCC)

BUS 112 – Advanced Calculator Skills (1 cr)

Formerly GBUS 112. This class covers special functions and operations of an electronic calculator. Topics include accumulation, fractions, percentages, powers and using machine memory. Prerequisite: BUS 110 (formerly GBUS 110). (SFCC)

BUS 113 - Essential Business Applications (1 cr)

Formerly GBUS 113. 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 (formerly GBUS 112). (SFCC)

BUS 114 - Basic Retail Application (1 cr)

Formerly GBUS 114. 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 (formerly GBUS 112). (SFCC)

BUS 115 - Budgeting Skills (1 cr)

Formerly GBUS 115. This class is a practical, basic guide to managing finances. Students prepare a workbook to set financial goals, prepare easy-to-use budget worksheets and keep track of spending. (SFCC)

BUS 116 – Cash, Checks and Credit Cards (1 cr)

Formerly GBUS 116. This class introduces wise use of banking and financial services, including checking and savings accounts, cash machines, credit cards, consumer loans and dangers of overextending credit use. (SFCC)

BUS 117 – Smart Consumer Buying Techniques (1 cr)

Formerly GBUS 117 . This class covers special tips and techniques to help consumers make their money go farther. Topics include saving money on buying food, transportation, appliances, energy, clothes, housing, health care, leisure and other family needs. (SFCC)

BUS 118 – Managing Risk (1 cr)

Formerly GBUS 118. This class covers the fundamental aspects of risk management, including home and auto insurance, health and disability insurance, and life insurance. (SFCC)

BUS 120 – International Business (5 cr)

Formerly GBUS 120. 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 121 – Global Business Life and Culture (5 cr)

Formerly GBUS 121. This is an interdisciplinary course designed to give students a broad overview of the business practice, culture and civilization of specific countries or regions. It uses a social, historical and cultural approach to various, contemporary, global societies and business practices. It includes lectures by U.S. and foreign faculty, supporting seminars, and related field trips and site visits. This course is offered only for SFCC students registered in the corresponding summer Study Abroad program. Prerequisite: Concurrent participation in summer Study Abroad program. (SFCC)

BUS 130 - International Finance (3 cr)

Formerly GBUS 130. 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, SFCC)

BUS 140 – International Marketing (3 cr)

Formerly GBUS 140. 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)

Formerly GBUS 150. 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, SFCC)

BUS 160 – International Management (3 cr)

Formerly GBUS 160. 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, SFCC)

BUS 170 – Export/Import Techniques (2 cr)

Formerly GBUS 170. An overview of the steps involved in exporting or importing a product or service. Course covers the different aspects of export/import and assists in developing a working knowledge of various terms and techniques essential to success. Topics include pros and cons of export/import, sources of private and public advice and assistance, methods, channels of distribution, terms of payment, appropriate documentation, and sources of financing. (SFCC)

BUS 180 – Travel and Tourism (3 cr)

Formerly GBUS 180. This course is an overview of the dynamic "world of travel" with an introduction to tourism and its international impact. Topics will include the who, why, what, when, where and how of travel. Emphasis is on organizing professional and personal travel as a life-enriching experience and exploring careers in the travel industry. (SFCC)

BUS 182 – Selling Travel (3 cr)

Formerly GBUS 182. Focusing on the skills and techniques necessary for successful sales, this course concentrates on principles of selling and promoting travel. Students learn to reach a target market, discover client travel needs, present features and benefits, create positive client rapport, and close the sales. (SFCC)

BUS 185 - Travelography: Destinations for Business and Tourism (3 cr)

Formerly GBUS 185. This course provides an introduction to the destinations and geographic background which are important for business and tourism. Topics include discussions of domestic and international sites (countries, continents, regions and cities), with an emphasis on locations, facilities, physical features, time, climate, weather, language, money, and other business and cultural implications for people traveling, or doing business at, different sites around the world. (SFCC)

BUS 186 – Customer Service for Travel (2 cr)

Formerly GBUS 186. 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)

BUS 187 – Making Travel Arrangements (2 cr)

Formerly GBUS 187. This class assists people in making reservations and travel arrangements for hotel/motel accommodations, airline flights, rental cars, airport transfers and so on. Topics cover both personal travel and making arrangements for professional travel for others. (SFCC)

BUS 188 - Organizing and Leading Tours (2 cr)

Formerly GBUS 188. 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 190 - Call Center Job Preparation Skills (3 cr)

Formerly GBUS 190. This course is designed to prepare students for the job search process. Topics included in the course are self-analysis, personal appearance and grooming, communicating ideas through written assignments and oral presentations, resume writing, employment letters, applications, interviewing practice, job search techniques, and call center functions. (SFCC)

BUS 191 – Job Success (1-3 cr)

Formerly GBUS 191. A course or courses to include selected material from the following areas: self-analysis, goal setting, career exploration, personal appearance and grooming, resume writing, application letter writing, the employment interview, communication of ideas, interviewing practice, and other techniques of the job search. (SFCC)

BUS 192 – Special Business Topics (1-5 cr)

Formerly GBUS 192. 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)

Formerly GBUS 193. 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)

Formerly GBUS 194. 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)

Formerly GBUS 205. 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)

Formerly GBUS 204. 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)

160 BUS 209 – Internet Project (3 cr)

Formerly GBUS 209. 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: IS 126, GRDSN 126 and concurrent enrollment in IS 226. (SFCC)

BUS 217 - Business Statistics (5 cr)

Formerly GBUS 217. 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)

Formerly GBUS 280. 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)

Formerly GBUS 284. 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)

Formerly GBUS 285. 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)

Formerly GBUS 286. 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)

Formerly GBUS 295. 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)

BUSINESS TECHNOLOGY

BT 089 - Basic Grammar for Business I (5 cr)

This course reviews 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; concurrent enrollment in BT 151. (SCC)

BT 090 – Basic Grammar for Business II (5 cr)

This course reviews fundamental writing skills with major emphasis on improvement of sentence structure and grammar. The importance of accuracy in spelling, punctuation, vocabulary and proofreading are included. Prerequisite: Reading assessment score in 40-50 percentile. (SCC)

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 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)

Business students learn basic writing skills including grammar, punctuation, spelling and vocabulary. Business terminology and usage are emphasized. Prerequisite: Must meet minimum standard on assessment test or 2.0 grade or better in BT 90. (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 122 – Office Skills Update (1-3 cr)

This course includes selected material from the following skill areas: keyboarding, formatting, notetaking, shorthand review, shorthand transcription, dictation, machine transcription and text editing/word processing. (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 125 - Office Politics (1-3 cr)

Students learn the definition of office politics using selected material in today's office environment. Self-analysis in a political setting; tools of political analysis; victims of office politics; when to change jobs; how politics affect women; minorities, older and younger workers; extraordinary politics; and politics in profit and nonprofit organizations are emphasized. Setting objectives and goals, and planning strategies are discussed. (SCC)

BT 126 - Spelling and Vocabulary (1-3 cr)

This course includes selected material from the following areas: spelling, prefixes, homonyms, synonyms, confusables, compound nouns, compound adjectives, capitalization, bias-free terms and other spelling demons; computer-related vocabularies, business-related vocabulary, important abbreviations and symbols; and use of the dictionary and thesaurus. (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 (1-3 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. (SCC)

BT 135 – Introduction to Machine Transcription (3 cr)

This is an introductory course using transcription machines with emphasis on developing listening skills and basic machine transcription techniques for document processing. Transcription is done applying correct grammar, punctuation, formatting, capitalization, number expression and abbreviations. (SFCC)

BT 140 - Notetaking (5 cr)

Students learn alphabetic shorthand, an abbreviated writing system based on longhand and phonics. Students, secretaries, managers and others who take dictation, classroom notes, telephone messages and meeting minutes are presented with techniques in writing notes quickly and legibly with a minimum of learning time. Prerequisite: Basic keyboarding skills. (SFCC)

See program/course abbreviation key on page 143.

COURSE DESCRIPTIONS

This course includes introduction and development of basic transcription skills using notes taken from dictation. The dictation includes letters, memos, minutes of meetings and reports. Other important components of the course are spelling and punctuation review. (SFCC)

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. Prerequisite: 1 credit of CAPPS 114. (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 175 – Voice Processing (2 cr)

Students learn skills necessary to create documents using Microsoft Office Speech Recognition to improve writing, increase productivity, avoid injury and overcome handicaps. Students also learn to create a voice profile, use voice training to improve speech recognition, dictate text and voice commands. This course is offered online only. Grading option: Pass/fail. (SCC)

BT 180 - E-Commerce for the Office (3-5 cr)

Students search and evaluate product sites on the Internet. Learning to secure transactions, discuss privacy issues and perform career searches is emphasized. (SCC)

BT 186 - Customer Service for Travel (2 cr)

Formerly GBUS 186. 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: BT 262 and 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. Prerequisite: 1 credit of CAPPS 112. (SFCC)

BT 257 – Presentation Graphics/Publishing (3 cr)

Basic principles of design aesthetics in the production of newsletters including graphics are introduced. Review of software applications is included. Students learn to convert data to the appropriate media for presentation purposes. Prerequisite: BT 103 or CAPPS 110-3 credits (SFCC only). (SCC, 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 262 - Word Processing (5 cr)

Students accomplish entry-level competence on word processors and knowledge of procedures in word processing centers. Assignments are given to develop proofreading, editing, formatting, mechanics of written expression and critical thinking skills. This course consists of three hours of lecture and four hours of skill development, two of which are to be arranged. Prerequisite: BT 102. (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. For SFCC-BT 262. (SCC, SFCC)

BT 265 – Information Processing Practicum (3-6 cr)

Students input, edit, revise, merge and/or print documents on word processing equipment in an office environment to produce manuals, tests, course outlines, mailing lists, correspondence and other documents. Labeling and filing rules for electronic media are presented following the directions of users. Prerequisite: Permission of instructor. (SCC)

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 (formerly ENG 101). (SCC, SFCC)

BT 280 - Project Management for the Office (3-5 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)

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)

COURSE DESCRIPTIONS

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-thejob 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 266 — Cooperative Education Seminar (1-2 cr)

For course description, see Cooperative Education. (SCC)

CARP 267 — Cooperative Education Work Experience (1-18 cr)

For course description, see Cooperative Education. (SCC)

CARP 288 - Cooperative Education Work Experience (No Seminar) (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. (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 261 – Alcohol and Other Drug Information School: Instructor Training (3 cr)

This course is designed to teach chemical dependency counselors or trainees to conduct the 9-12 hour class that is required for nonchemically dependent persons convicted for driving under the influence. This course assists in developing curriculum planning and instruction skills. Prerequisite: HS-SUB 131, 275. (SFCC)

HSSUB 275 – Physiological Actions of Alcohol and Drugs (5 cr)

This is a review of the pharmacology of psychoactive drugs. It is a researchbased 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)

Formerly CHEM 110. 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)

Formerly CHEM 100. 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 111 – Chemistry Minicourse Series (1-3 cr)

Each course in this series addresses one special aspect of how chemistry is practically applied in modern society. All courses in the series emphasize student-centered, collaborative, hands-on learning activities with an aim to trigger an appreciation for fundamental chemistry concepts. The chemical concepts are presented on a need-to-know basis for a particular minicourse. Sample titles of minicourses are: nuclear chemistry; environmental chemistry; and chemistry in art, food, medicine, household products, transportation or industry. Designed to meet requirement of laboratory science credits for A.A. degree. Students are encouraged to take more than one of these minicourses and accumulate credits to equal a full 5-credit course. (SCC)

CHEM 112 - Chemistry Minicourse Series (1-3 cr)

Each course in this series addresses one special aspect of how chemistry is practically applied in modern society. All courses in the series emphasize student-centered, collaborative, hands-on learning activities with an aim to trigger an appreciation for fundamental chemistry concepts. The chemical concepts are presented on a need-to-know basis for a particular minicourse. Sample titles of minicourses are: nuclear chemistry; environmental chemistry; and chemistry in art, food, medicine, household products, transportation or industry. Designed to meet requirement of laboratory science credits for A.A. degree. Students are encouraged to take more than one of these minicourses and accumulate credits to equal a full 5-credit course. (SCC)

CHEM 113 – Chemistry Minicourse Series (1-3 cr)

Each course in this series addresses one special aspect of how chemistry is practically applied in modern society. All courses in the series emphasize student-centered, collaborative, hands-on learning activities with an aim to trigger an appreciation for fundamental chemistry concepts. The chemical concepts are presented on a need-to-know basis for a particular minicourse. Sample titles of minicourses are: nuclear chemistry; environmental chemis-try; and chemistry in art, food, medicine, household products, transportation or industry. Designed to meet requirement of laboratory science credits for A.A. degree. Students are encouraged to take more than one of these minicourses and accumulate credits to equal a full 5-credit course. (SCC)

CHEM 114 - Introduction to Chemistry--Online (5 cr)

Introduction to chemistry is an entry-level chemistry class with a modest prerequisite of elementary algebra. This course is taught online via the Internet and is aimed at people who have no prior chemistry experience. This course does not qualify as a laboratory science. Prerequisite: Basic algebra. (SCC, SFCC)

CHEM 115 – Environmental Chemistry (5 cr)

This introductory course explores a wide range of topics for nonscience majors. Topics may 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 quality and health, chemistry of soils, sources and characteristics of 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. (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 (formerly CHEM 161) 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 (5 cr)

Formerly CHEM 161. A survey of inorganic chemistry for nursing and allied health sciences. Includes atomic structure, bonding periodicity, stoichiometry, gases, equilbrium, solution chemistry and nuclear chemistry. (SCC, SFCC)

CHEM& 122 - Intro to Organic Chem (5 cr)

Formerly CHEM 162. A survey of organic chemistry including structure, function and chemistry of aliphatic and aromatic hydrocarbons, alcohols, ethers, carboxylic acids, amines and related compounds; mechanisms, and stereochemistry. Prerequisite: CHEM& 121 (formerly CHEM 161) or permission of instructor. (SCC, SFCC)

CHEM& 123 - Intro to Biochemistry (5 cr)

Formerly CHEM 163. A brief survey of biochemical principles, including structures of biomolecules, enzymatic catalysis, thermodynamics, metabolic pathways, genetic expression and biotechnology. Prerequisite: CHEM& 122 (formerly CHEM 162) 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 (formerly CHEM 141 General Chemistry) 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)

Formerly CHEM 141. 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: Two years of high school algebra or MATH& 141 (formerly MATH 111) (may be taken concurrently). One year of high school chemistry with a 2.0 grade or better or CHEM& 110 (formerly CHEM 100) or permission of instructor. (SCC, SFCC)

CHEM& 162 - General Chem w/ Lab II (5 cr)

Formerly CHEM 142. 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 (formerly CHEM 141) or permission of instructor. (SCC, SFCC)

CHEM& 163 - General Chem w/ Lab III (5 cr)

Formerly CHEM 143. 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 (formerly CHEM 142) or permission of instructor. (SCC, SFCC)

CHEM& 241 – Organic Chem I (3 cr)

Formerly CHEM 201. 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 (formerly CHEM 143) or equivalent and concurrent enrollment in CHEM& 241, CHEM& 251 (formerly CHEM 201, 211). (SCC, SFCC)

CHEM& 242 – Organic Chem II (3 cr)

Formerly CHEM 202. This course is a continuation of CHEM& 241 (formerly CHEM 201) 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 (formerly CHEM 201), CHEM& 251 (formerly CHEM 211) and concurrent enrollment in CHEM& 252 (formerly CHEM 212). (SCC, SFCC)

CHEM& 243 – Organic Chem III (3 cr)

Formerly CHEM 203. This course is a continuation of CHEM& 242 (formerly CHEM 202) 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 (formerly CHEM 202), CHEM& 252 (formerly CHEM 212) and concurrent enrollment in CHEM& 253 (formerly CHEM 213). (SCC, SFCC)

CHEM& 251 – Organic Chem Lab I (2 cr)

Formerly CHEM 211. 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 (formerly CHEM 201). (SCC, SFCC)

CHEM& 252 – Organic Chem Lab II (2 cr)

Formerly CHEM 212. This course uses experiments to support lecture in the mechanistic approach of chemical synthesis and instrumentation. Prerequisite: CHEM& 241 (formerly CHEM 201), CHEM& 251 (formerly CHEM 211) and concurrent enrollment in CHEM& 242 (formerly CHEM 202). (SCC, SFCC)

CHEM& 253 – Organic Chem Lab III (2 cr)

Formerly CHEM 213. This course supports the concepts and mechanisms discussed in CHEM& 213(formerly CHEM 203) with organic synthesis experiments. Prerequisite: CHEM& 242, CHEM& 252 (formerly CHEM 202, 212) and concurrent enrollment in CHEM& 243 (formerly CHEM 203). (SCC, SFCC)

CHINESE

CHIN& 121 - Chinese I (5 cr)

Formerly CHINA 101. 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)

Formerly CHINA 102. Students continue with the concepts introduced in CHIN& 121 (formerly CHINA 101) 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 (formerly CHINA 101) or permission of instructor. (SCC, SFCC)

CHIN& 123 – Chinese III (5 cr)

Formerly CHINA 103. Students continue with the concepts introduced in CHIN& 122 (formerly CHINA 102) 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 (formerly CHINA 102) or permission of instructor. (SCC, SFCC)

CHIN 141 – Chinese Conversation and Culture (5 cr)

Formerly CHINA 122. 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)

Formerly CHINA 223. 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 (formerly CHINA 101), 141 (formerly CHINA 122) or permission of instructor. (SCC)

CHIN 241 – Chinese Conversation and Culture (5 cr)

Formerly CHINA 222. 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 137 – Engineering Problems (3 cr)

Students are introduced to computer applications utilized in the solution of engineering problems. Computer software such as spreadsheets and BASIC language for problem solving is emphasized. Graphing, logarithms and statistics are presented. Prerequisite: CET 111, 121, CIS 105, 106. (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

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)

Formerly ENG 109 and SPCH 101. 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)

Formerly SPCH 103. This course provides an opportunity for students to learn and apply the theory of interpersonal communication. Learning experiences include working with personal growth, verbal and nonverbal communication skills, active listening, stress management and resolving communication conflicts to develop healthy personal relationships. (SCC)

CMST 104 – College Ambassadors (1-3 cr)

Formerly SPCH 104. 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 (formerly SPCH 220) or permission of instructor. (SCC)

CMST 105 - College Ambassadors (1-3 cr)

Formerly SPCH 105. 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 (formerly SPCH 220) or permission of instructor. (SCC)

CMST 106 – College Ambassadors (1-3 cr)

Formerly SPCH 106. 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 (formerly SPCH 220) or permission of instructor. (SCC)

CMST 107 - ESL Speech (5 cr)

Formerly SPCH 107. This is an English communication course offered for students whose native language is not English. The emphasis of the course is to learn the sounds, rhythm, stress and intonation of English; to develop listening skills, articulation skills, pronunciation skills; and to practice idiomatic English. (SFCC)

CMST 110 – Voice and Articulation (3 cr)

Formerly SPCH 110. This course teaches students to understand how speech is created with guidance on the improvement of their speech production. Specifically, students discuss and apply principles in breath support pitch, volume, vocal quality and articulation, and principles basic to speaking clearly. May be repeated up to a maximum of 6 credits. (SCC, SFCC)

CMST 111 - Voice and Articulation I (4 cr)

Formerly SPCH 111. 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)

Formerly SPCH 112. Students continue the concepts learned in CMST 111 (formerly SPCH 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 are emphasized. Presentational skills also are included. Prerequisite: CMST 111 (formerly SPCH 111), passing the SLEP test with a minimum score of 50 or permission of instructor. (SCC)

CMST 113 - Voice and Articulation III (4 cr)

Formerly SPCH 113. Students continue the concepts learned in CMST 111 (formerly SPCH 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 are emphasized. Presentational skills also are included. Prerequisite: CMST 112 (formerly SPCH 112), passing the SLEP test with a minimum score of 50 or permission of instructor. (SCC)

CMST 114 - Oral Interpretation of Literature (5 cr)

Formerly SPCH 114. 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 (5 cr)

Formerly SPCH 120. 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)

Formerly SPCH 121. 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)

Formerly SPCH 127. 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 201 – Speech for Business and Professions (3 cr)

Formerly SPCH 201. Concentrated study and practice in oral business skills with practical experience in giving and receiving instructions, job interviewing and resume writing. Also included are presentations to promote sales and services. For second-year students with declared major; not an entry-level course. (SCC)

CMST 204 – College Ambassadors (1-3 cr)

Formerly SPCH 204. 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 (formerly SPCH 220) or permission of instructor. (SCC)

CMST 205 - College Ambassadors (1-3 cr)

Formerly SPCH 205. 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 (formerly SPCH 220) or permission of instructor. (SCC)

CMST 206 - College Ambassadors (1-3 cr)

Formerly SPCH 206. 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 (formerly SPCH 220) or permission of instructor. (SCC)

CMST& 210 – Interpersonal Communication (5 cr)

Formerly SPCH 102. 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)

Formerly SPCH 285 and ENG 111. Potential for success can be increased through the development of public speaking skills. This class focuses on the fundamental principles of effective public speaking. Students have the opportunity to develop skills in informative and persuasive speaking using extemporaneous, manuscript and impromptu styles of delivery. Also included are speeches to entertain and for special occasions, such as a speech of tribute, good will, and a eulogy. Prerequisite: SFCC only: recommended minimum reading placement score: COMPASS 80, ASSET 40. (SCC, SFCC)

CMST 223 - Intercollegiate Speech and Debate (1-5 cr)

Formerly SPCH 223. 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)

Formerly SPCH 224. 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)

Formerly SPCH 225. 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)

Formerly SPCH 210. 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)

Formerly SPCH 220. 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& 230 – Small Group Communication (5 cr)

Formerly SPCH 286. Potential for success can be increased through the development of public speaking skills. This class focuses on the fundamental principles of effective public speaking. Students have the opportunity to develop skills in informative and persuasive speaking using extemporaneous, manuscript and impromptu styles of delivery. Also included are speeches to entertain and for special occasions, such as a speech of tribute, good will, and a eulogy. Prerequisite: SFCC only: recommended minimum reading placement score: COMPASS 80, ASSET 40. (SCC, SFCC)

CMST 250 – Managing Conflict Through Communication (5 cr)

Formerly SPCH 250. 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 (formerly SPCH 102). (SCC)

CMST 266 — Cooperative Education Seminar (1-2 cr)

Formerly SPCH 266. For course description, see Cooperative Education. (SCC)

CMST 267 – Cooperative Education Work Experience (1-18 cr)

Formerly SPCH 267. For course description, see Cooperative Education. (SCC)

CMST 280 - Public Relations (5 cr)

Formerly SPCH 280. 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 (formerly SPCH 101 and ENG 109). (SCC)

CMST 287 - Business and Professional Communication (3-5 cr)

Formerly SPCH 287. 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, interviewing from the interviewer's point of view, 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)

Formerly SPCH 294. 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. 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. Prerequisite: CATT 120. (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. The skills required on the Microsoft Access MOUS (Microsoft Office User Specialist) certification examination are presented in CATT 122 and 123. Prerequisite: CATT 122. (SCC)

CATT 124 - Advanced Word Processing (5 cr)

This course is a continuation of the concepts introduced in CATT 120 with emphasis on the study of advanced power features and software concepts. Prerequisite: CATT 120 or permission of instructor. (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. Prerequisite: CIS 110. (SCC)

CATT 130 - Introduction to WordPerfect (2 cr)

This course introduces students to basic WordPerfect features and how they are used to create and format a variety of documents. The course is designed for nonbusiness and business majors. Prerequisite: Keyboarding skills. (SCC)

CATT 131 - Advanced WordPerfect (2 cr)

The second in a series of courses designed to teach the student ways to enhance documents and productivity using advanced WordPerfect word processing functions. Prerequisite: CATT 130. (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 and concurrent enrollment in CATT 144. (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. 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. Prerequisite: CATT 138. (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: BCS 110, 204, 205 and CATT 120, 121, 122, 134 and concurrent enrollment in CATT 150. (SCC)

CATT 144 – Computer Lab III (2 cr)

This scheduled computer lab presents practical applications of materials presented in CATT 134. The course content includes graphic applications using clip-art and creation of video graphics. Prerequisite: Concurrent enrollment in CATT 134. (SCC)

CATT 150 – Computer Lab IV (2 cr)

This scheduled computer lab presents practical applications of materials presented in CATT 140. The course content includes switching menus, cutting, copying, pasting, dragging, dropping, inserting and linking. Prerequisite: Concurrent enrollment in CATT 140. (SCC)

CATT 161 - Microsoft Word for Windows I (2 cr)

The course introduces Microsoft Windows operating systems. Use of Word application of Microsoft Office Professional software includes entering, formatting, revising, editing, replacing, automatically correcting, checking, changing style, reformatting and printing text. Most documents are prerecorded, so students spend little time keying copy; emphasis is on learning to use the software. Prerequisite: Ability to keyboard by touch at 25 wpm; some computer familiarity desirable. (SCC)

CATT 162 – Microsoft Word for Windows II (2 cr)

This is a continuation of CATT 161. The course includes using templates and Wizards, creating, formatting, reformatting varying columns, adding graphics and text emphasis, using outline views for rearranging text, promoting and demoting headings, working with multiple documents and files, using and creating online forms, and creating and printing of merged documents. Most documents are prerecorded, so students spend little time keying copy; emphasis is on learning to use the software. Prerequisite: CATT 161. (SCC)

CATT 172 – Introduction to FrontPage (2.5 cr)

Students create web pages, import text and graphics, create hyperlinks and tables, and add text animations and other enhancements to Web pages. Prerequisite: Windows experience and previous computer experience. (SCC)

CATT 185 - Introduction to Vista and the Internet (2.5 cr)

Students develop the ability to use a Windows Vista operating system and acquire skills to navigate the Internet. Prerequisite: Keyboarding skills. (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. The skills required for MOUS (Microsoft Office User Specialist) certification examination are presented. Prerequisite: CATT 190. (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. The skills required for the expert level of the Microsoft Word MOUS (Microsoft Office User Specialist) certification examination are presented in CATT 220 and 221. Prerequisite: CATT 121. (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. The skills required for the expert level of the Microsoft Word MOUS (Microsoft Office User Specialist) certification examination are presented in CATT 220 and 221. Prerequisite: CATT 220. (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. Prerequisite: CATT 123. (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. Prerequisite: CATT 222. (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. The skills required for the expert level of the Microsoft Excel MOUS (Microsoft Office User Specialist) certification examination are presented. Prerequisite: CATT 139. (SCC)

CATT 239 - Advanced Microsoft Excel II (2.5 cr)

This course is a continuation CATT 238. Students record, run and edit macros; extract data and apply data filters; use analysis tools; and learn to collaborate in workgroups. The skills required for the Expert level of the Microsoft Excel MOUS (Microsoft Office User Specialist) certification examination are presented. Prerequisite: CATT 238. (SCC)

CATT 241 – Project Management Applications (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)

See program/course abbreviation key on page 143.

COURSE DESCRIPTIONS

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COMPUTER INFORMATION SYSTEMS

CIS 101 — Technical Introduction to Computer Information Systems (5 cr)

This course introduces technical computer information systems and acquaints students with concepts and knowledge of system software and design, and the hardware used to convert data into information in business world applications. (SCC)

CIS 105 - Computer Fundamentals for Vocations I (1-5 cr)

This course introduces students to computer concepts in regard to the general elements of computer systems. Content may include DOS commands, computer terminology, data communication concepts, introductory Computer Assisted Drafting (CAD) principles, and the practical applications of relevant application software packages. Course content may vary depending on the individual vocational program 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). Students learn the technology required to develop and maintain static web sites. Prerequisite: CIS 110 or permission of instructor. (SCC)

CIS 112 – Graphic Design for the Web (5 cr)

This course provides an in-depth exploration of how to plan, design and execute visually appealing, web-sensitive images. JPEG, GIF, PNG and other formats are discussed. Graphic formats and layouts also are presented. (SCC)

CIS 114 – JavaScript (5 cr)

Students build on advanced theories in web development using current web development software. As technology advances in industry, the scripting skills taught in this class provide web developers the ability to create advanced and sophisticated web sites. Prerequisite: CIS 111, 146 or permission of instructor. (SCC)

CIS 116 - Active Directories (5 cr)

This course is designed for students who are experienced with Microsoft Windows 2000 Server. Using previously acquired skills, students learn Windows 2000 Active Directories. Topics include planning, configuring and administering an Active Directory infrastructure; configuring Domain Name System (DNS); using group policies; remotely deploying the Windows 2000 operating system; using an Active Directory to centrally manage users, groups, shared folders and network resources; and monitoring and optimizing the Active Directory performance. Prerequisite: CIS 244 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 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 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 web site from the first concept to the finished, published web site. Planning aspects and basic elements necessary to publish a successful site are emphasized. Prerequisite: CIS 111 and 112 or permission of instructor. (SCC)

CIS 146 – Introduction to Programming (5 cr)

Students explore the different architectures of all computer programming languages and compare the similarities and differences. Structured programming theories and concepts, as well as object-oriented theories and concepts, 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. Course content varies depending upon the number of credits and topics chosen. (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 web 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: Permission of instructor. (SCC)

CIS 148 – Emerging Technologies 2 (1-5 cr)

Students research and evaluate emerging technologies. In addition, students make presentations about the features and uses of web technology to the class and the entire web 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: 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 Macromedia Flash and Freehand, Adobe Photoshop, and other software. 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 104, 112 and 120 or permission of instructor. (SCC)

CIS 205 – Advanced Operating Systems (5 cr)

This course prepares students for entry-level IT support technician positions using computer operating systems. 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 UNIX (5 cr)

This course introduces the 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 UNIX, such as installing and configuring applications are presented. (SCC)

CIS 212 — Advanced Report Program Generator Language (RPG) for Business (5 cr)

Students, through hands-on experience, learn and apply advanced concepts of the Report Program Generator (RPG) language in business applications. Processing techniques, utilizing random file processing and multiple file handling are presented, enabling students to prepare structured programs for business-oriented applications. Prerequisite: CIS 211. (SCC)

CIS 213 – Advanced UNIX (5 cr)

Students with experience in UNIX servers use skills to administer UNIX systems in a network environment. They maintain UNIX systems, configure and troubleshoot the Network File System (NFS), and configure a Network Information Service (NIS) environment. Prerequisite: CIS 206, 240. (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 215 - Advanced Active Server Pages (5 cr)

Students learn to develop web applications for Internet/Intranet environments using server-side scripting. Techniques for building pages dynamically, accessing databases easily and creating secure commercial applications are presented. Prerequisite: CIS 115 or permission of instructor. (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. Prerequisite: CIS 126, 146 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 2003 Network Infrastructure (5 cr)

This course introduces remote access in a Windows 2003 network infrastructure. Students learn to implement, manage, maintain and troubleshoot TCP/IP while addressing, DNS, security and routing. Prerequisite: CIS 244. (SCC)

CIS 237 - Internet Information Server Administration (3 cr)

Using Internet Information Server, this course encompasses configuration, management tools, architecture, WWW/FTP/SMTP/NNTP services, security, encryption, digital signatures and indexing. Prerequisite: CIS 236 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 241 - Novell Administration (5 cr)

This is the first of two courses introducing the basic administration principles of networking. Topics include operating systems overview, file systems management, login and file security, login scripts, directory services management, network printing and installation of applications. Prerequisite: CIS 205 or permission of instructor. (SCC)

CIS 242 - Novell Advanced Administration (5 cr)

This is the second of two courses designed as an advanced introduction to the network administration principles of a widespread network operating system. Topics include procedures in network administration, server configuration, management, protocol support, optimization and troubleshooting. NetWare software from Novell is presented. Prerequisite: CIS 241. (SCC)

CIS 243 – Windows XP Professional (5 cr)

This is the first of courses introducing students to the basic administration principles of networking in a Microsoft environment. Topics include operating systems overview, file systems management, login and file systems security, network printing and installation of network applications. Prerequisite: CIS 205 or permission of instructor. (SCC)

CIS 244 – Windows 2003 Server (5 cr)

This course introduces managing, maintaining and troubleshooting devices, users, groups, computers, resource access and disaster recovery in a Windows 2003 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 Networking (5 cr)

Students address issues concerning repeaters, hubs, bridges, switches and routers as well as their functions within the first three layers of the OSI reference model. Concepts of collision domains, addressing media access and the TCP/IP protocol are emphasized. Current networking standards set forth by the Underwriter's Laboratory and how they apply to wiring and networking equipment rooms are discussed. Network address classes, subnetting and network registration are covered in depth. Prerequisite: CIS 240 or permission of instructor. (SCC)

CIS 251 – Cisco Network Routing (5 cr)

Students are provided with hands-on experience required to set up small wide area network (WAN) and local area network (LAN) routers. Topics include physical and logical LAN and WAN topologies, network cabling, router commands, Trivial File Transfer Protocol (TFTP) servers, router troubleshooting and minor repairs. Prerequisite: CIS 250 or permission of instructor. (SCC)

CIS 252 – Cisco LAN Design (5 cr)

Students learn to design and implement Local Area Networks (LAN) utilizing high-speed switching equipment, Virtual Area Networks (VLAN), workgroup servers and network routing. Prerequisite: CIS 251 or permission of instructor. (SCC)

CIS 253 – Cisco WAN Design (5 cr)

Students learn to design and implement Wide-Area Networks (WAN) utilizing routers, frame relay, Integrated Switch Digital Networks (ISDN) and Point-to-Point Protocol (PPP). Prerequisite: CIS 252 or permission of instructor. (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 255 – BASIC Language for Business (5 cr)

Students utilize and understand the syntax required of BASIC for use in business applications through hands-on experience. Programming utilizing structured methodologies is required. Processing techniques utilizing table concepts, sequential file processing, random file processing, and batch and interactive programming concepts are utilized by students to complete business- oriented application programs. Prerequisite: CIS 101. (SCC)

CIS 256 – .Net Application Development (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 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 and object-oriented programming techniques usingVisual Basic.NET andVisual C#.NET. Prerequisite: CIS 256, 282 or permission of instructor. (SCC)

CIS 261 – SQL Database Administration (5 cr)

Using SQL Server, this course encompasses SQL architecture, installation, configuration, login security, permissions, transfer/migration, SQL Server Agent and data replication. Prior understanding of query statements is required. Prerequisite: CIS 122, 126, 244 or permission of instructor. (SCC)

CIS 262 – SQL Database Design (5 cr)

Using SQL Server, this course encompasses storage architecture, creating/maintaining indexes, enforcing data integrity, managing locks, creating views, and designing store procedures and triggers. Prerequisite: CIS 261 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 264 — Enterprise Mail Design (5 cr)

Using Exchange Server, this course encompasses installation, X.400/X.500 concepts, intra/intersite communications, site connectors and X.400 connectors, directory and public folder replication, and Internet integration. Prerequisite: CIS 263 or permission of instructor. (SCC)

CIS 265 – Database Programming I (5 cr)

Students learn to expand the concepts used to design and implement a relational database. Once the database is developed, students learn to program n-tier applications using views, user-defined functions, stored procedures and triggers. Prerequisite: CIS 126 or permission of instructor. (SCC)

CIS 266 – Cooperative Education Seminar (1-2 cr)

For course description, see Cooperative Education. (SCC)

CIS 267 – Cooperative Education Work Experience (1-18 cr)

For course description, see Cooperative Education. (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 256, 284 or permission of instructor and concurrent enrollment in CIS 258. (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 281 – "C" Language for Business (5 cr)

Students utilize the syntax required of "C" for use in business applications. Programming utilizing structured methodologies is required. Processing techniques utilizing table concepts, sequential files processing, random file processing, and batch and interactive programming concepts are introduced. Students create business-oriented application programs. Prerequisite: CIS 101, 255. (SCC)

CIS 282 – Programming Principles I (5 cr)

Students learn programming fundamentals using the Java platform. Students implement Java with programming concepts using object-oriented terminology. Prerequisite: CIS 146 or permission of instructor. (SCC)

CIS 283 – Programming Principles II (5 cr)

This course is an extension of CIS 282 and introduces the power of objectoriented 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 282 or permission of instructor. (SCC)

CIS 284 – Ruby on Rails (5 cr)

Students use the Ruby language and Rails web framework to create scaleable and robust web applications. Students learn to develop server-side applications to interface with web pages, making web sites more dynamic and powerful. Prerequisite: CIS 283 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 288 — Cooperative Education Work Experience (No Seminar) (1-18 cr)

For course description, see Cooperative Education. (SCC)

CIS 290 - E-Commerce Application Database (5 cr)

Students apply their systems analysis, design and database skills to a team project-oriented setting to produce required deliverable documents used by a DBA. A fully functional database for an E-commerce environment is implemented. Prerequisite: CIS 272, 279 or permission of instructor. (SCC)

CIS 296 - Final Quarter Project (5 cr)

Students are assigned a web technologies project to include the concepts learned up to the sixth quarter of the A.A.S. degree. Students learn to work with a variety of people in a team environment to fully implement and design a dynamic and interactive web site. Students and the instructor work together while completing the project. Prerequisite: Permission of instructor. (SCC)

COMPUTING-COMPUTER APPLICATIONS

CAPPS 102 - Introduction to Office (1 cr)

This is an open-entry, open-exit, self-paced course. It is designed for students with no previous computing experience. It explains hardware and software; and introduces the student to PC operating systems, word processing, spreadsheets and database applications. The software used for this course is the MS Office Suite. (SFCC)

CAPPS 104 – Windows (1 cr)

This is an open-entry, open-exit, self-paced course. There is an introduction to the Microsoft Operating System, Windows. Students learn to use the system for performing a wide range of computing tasks, including management operations, icon, menus, environment settings, running multiple applications and transfer of data between software applications. (SFCC)

CAPPS 110 – Word (1-5 cr)

This is an open-entry, open-exit course that offers beginning to advanced instruction in Microsoft Word. The course is designed to cover basic information and to prepare students for the Microsoft Office User Specialist exams. It is a self-paced course that allows students to gain as much knowledge as they need in Word. The course is modularized and students can be placed appropriately, based on the current knowledge of the software. This is a variable-credit course. The course may be repeated in order to earn the maximum of 5 credits. (SFCC)

CAPPS 112 - Excel (1-5 cr)

This is an open-entry, open-exit course that offers beginning to advanced instruction in Microsoft Excel. The course is designed to cover basic information and to prepare students for the Microsoft Office User Specialist exams. It is a self-paced course that allows students to gain as much knowledge as they need in Excel. The course is modularized and students can be placed appropriately, based on current knowledge of the software. This is a variable-credit course. The course may be repeated in order to earn the maximum of 5 credits. (SFCC)

CAPPS 114 - Access (1-5 cr)

This is an open-entry, open-exit course that offers beginning to advanced instruction in Microsoft Access. The course is designed to cover basic information and to prepare students for the Microsoft Office User Specialist exams. It is a self-paced course that allows students to gain as much knowledge as they need in Access. The course is modularized and students can be placed appropriately, based on current knowledge of the software. This is a variable-credit course. The course may be repeated in order to earn the maximum of 5 credits. (SFCC)

CAPPS 116 - PowerPoint (1-3 cr)

This is an open-entry, open-exit course that offers beginning to advanced instruction in Microsoft PowerPoint. The course is designed to cover basic information and to prepare students for the Microsoft Office User Specialist exam. It is a self-paced course that allows students to gain as much knowledge as they need in PowerPoint. The course is modularized and students can be placed appropriately, based on current knowledge of the software. This is a variable-credit course. The course may be repeated in order to earn the maximum of 3 credits. (SFCC)

CAPPS 118 – WordPerfect (1-5 cr)

This is an open-entry, open-exit course that offers beginning to advanced instruction in WordPerfect. The course is designed to cover basic information and to progress through a high level of skills. It is a self-paced course that allows students to gain as much knowledge as they need in WordPerfect. The course is modularized and students can be placed appropriately, based on current knowledge of the software. This is a variable-credit course. The course may be repeated in order to earn the maximum of 5 credits. (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)

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 91, approval of instructor or test placement in MATH 99. (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)

Formerly CS 201. 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 (formerly MATH 111) (can be concurrent) or permission of instructor. (SFCC)

CS 142 - Introduction to Computer Science II (5 cr)

Formerly CS 203. 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 (formerly CS 201) 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 (formerly CS 201) or permission of instructor. (SFCC)

CS 223 - VB .NET (5 cr)

This course focuses on the fundamental principles of programming, presenting the unique visual and object-oriented features of Visual Basic .NET as a tool for learning how to program. The course allows the student to become proficient in VB .NET and with the principles of good program design. Students write and demonstrate simple structured programs, but with well-developed user interfaces. Programming assignments will include procedural techniques and event-driven processing. Prerequisite: Math 99 or permission of instructor. (SFCC)

CS 225 – Advanced Visual Basic (5 cr)

This is an intensive course using object-oriented programming in the Visual Basic Language. Students learn to develop reusable code in standard VB and in Active X. Students learn to integrate Visual Basic programs with complex systems of databases. Prerequisite: CS 223 or permission of instructor. (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 (formerly CS 203) 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 (formerly MATH 111) (Can be concurrent). (SFCC)

CS 266 - Cooperative Education Seminar (1-2 cr)

For course description, see Cooperative Education. (SFCC)

CS 267 - Cooperative Education Work Experience (1-18 cr)

For course description, see Cooperative Education. (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 (formerly CS 203). (SFCC)

COMPUTING-INFORMATION SYSTEMS

IS 101 – Survey of Information Technology (2 cr)

This course teaches options, outcomes and consequences of information technology education and training programs. It assists students in determining education/training objectives and setting goals. Students participate in group projects, document their research in written and oral reports, and develop a personalized and detailed training/education plan. (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 126 - Internet Publishing (2 cr)

This course is designed to cover advanced topics in creating static pages for the World Wide Web. It provides the student experience in designing and maintaining complex static web sites. Prerequisite: IS 103, 160, DIGIM 106 or permission of instructor and concurrent enrollment in GRDSN 126. (SFCC)

IS 132 - Computer Ethics (3 cr)

This class addresses 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 are explored. (SFCC)

IS 142 - Hardware Fundamentals (3 cr)

This is a course about computer operation and software applications. Students learn how to perform daily computer operations, including setting up a computer and installing new software. Students also develop skills for evaluating and selecting business computer software and hardware. Prerequisite: IS 120 or permission of instructor. (SFCC)

IS 143 – Operating System Fundamentals (2 cr)

The common operating systems for computers today are discussed and compared. Hard disk management of operating systems and network terminology are introduced. Selected operating systems are available for the student to experience. Prerequisite: IS 120 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 164 – 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, 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 or permission of instructor. (SFCC)

IS 209 – Internet Project (3 cr)

Students develop marketing strategies for use on the Internet World Wide Web, which culminates in the creation of a web site. Prerequisite: GRDSN 126, IS 126. (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)

COURSE DESCRIPTIONS

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 214 — Internet Programming III (5 cr)

This course applies server-side Internet programming technologies to create database-driven web pages. Server-side technologies covered include Active Server Pages (ASP), CGI-PERL, and PHP. Web server environments include Internet Information Server (IIS) and Apache. Prior training in HTML and client-side programming is required. Prerequisite: IS 212. (SFCC)

IS 216 – Applied XML (3 cr)

This course teaches how data can be shaped using Extensible Markup Language (XML). Students learn to structure valid XML documents, format XML via Cascading Style Sheets, transform XML using XSLT, and apply a highly-developed XML language such as MathML. Special emphasis on current industry uses for XML is provided. Previous knowledge of HTML is required. (SFCC)

IS 228 — Internet Servers (4 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 164 or permission of instructor. (SFCC)

IS 232 – Computer Forensics/Security Seminar (2 cr)

This seminar provides a sounding board and support mechanism where students discuss and receive help with workplace-related issues. Students review and analyze current computer forensics and security issues. Assignments enable students to meet with professionals and visit local industries involved with forensics and/or computer security. (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 238 – Computer Forensics III (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 236 or permission of instructor. (SFCC)

IS 240 – 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 142, IS 143 and IS 144 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: IS 164 or 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 246 - Novell Network (3 cr)

This course provides students with basic knowledge about implementing Novell NetWare and using its management tools. Students participate in scenarios and multiple exercises to practice skills and reinforce the concepts they learn. Prerequisite: IS 164 or permission of instructor. (SFCC)

IS 247 – Network Security III (5 cr)

Students discover the possible vulnerabilities of several major operating systems and how to strengthen them. Software used to compromise systems are studied. Different ways and type of attacks used by individuals who attempt to gain access to unauthorized resources are presented. Prerequisite: IS 245 or permission of instructor. (SFCC)

IS 250 – Introduction to E-commerce (5 cr)

This course provides an overview of e-commerce and e-business. Topics for this course include e-business, understanding the impact of the Internet on business, web-based tools, e-business software, security issues, electronic payment systems, marketing strategies, legal and ethical issues, and business strategies online. Prerequisite: GBUS 101. (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: CAPPS 114 or permission of instructor. (SFCC)

IS 262 – Distributed Databases (5 cr)

This course teaches students to manage a database that is divided into several fragments or that may reside on multiple servers and/or media. The affects of business growth and management on the distributed database is investigated. The course stresses making the complexity of the underlying database transparent to the end user. Prerequisite: IS 260. (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)

IS 280 - E-Commerce Capstone Project I (2 cr)

This course serves as part one of the capstone of the e-commerce A.A.S. degree. In this portion of the capstone project, students select a business, the hardware and software, set up security for the web site and market the venture. To the maximum extent possible, student projects are in conjunction with businesses or organizations as clients. The capstone project covers two quarters to allow adequate time for students to deal with a fully operational e-commerce site. Subsequent enrollment in E-Commerce Capstone Project II is required. Prerequisite: CAPPS 114, IS 226, IS 250. (SFCC)

IS 282 - E-Commerce Capstone Project II (2 cr)

This course serves as part two of the capstone for the e-commerce A.A.S. degree. It is the continuation of Project I. Students deal with security breaches to a web site along with the maintenance, modifications and monitoring that go on in the everyday operations of an e-commerce site. To the maximum extent possible, student projects are in conjunction with businesses or organizations as clients. Prerequisite: IS 280. (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 113 – Manicuring Concepts I (4 cr)

Students are introduced to the basic concepts of manicuring. Theories presented include the proper use of implements, cosmetics and materials used in manicures, pedicures, and artificial nail applications. Principles of bacteriology and sanitation methods are emphasized. (SCC)

COS 114 – Manicuring Applications I (10 cr)

Students learn basic application techniques and clinical practice on models and mannequins in the following areas: manicuring, pedicuring, nail preparation, acrylic sculpture, tip application, overlays and nail removal. Sanitation methods utilized in a salon setting are emphasized. No more than 25 percent of all services are performed on models. (SCC)

COS 115 - Manicuring Concepts II (4 cr)

This course continues with the concepts of manicuring introduced in COS 113. Nail structure, nail diseases and disorders, bacteriology, and sanitation methods are emphasized. (SCC)

COS 116 - Manicuring Applications II (10 cr)

Students learn advanced application techniques and clinical practice on models and mannequins in the following areas: manicuring, pedicuring, nail preparation, acrylic sculpture, tip application, various nail overlays and nail removal. Safety and sanitary methods are emphasized. No more than 25 percent of all services are performed on models. Prerequisite: COS 113, 114. (SCC)

COS 119 – Advanced Manicuring Concepts (1 cr)

This course continues the concepts introduced in COS 115 with an emphasis on the safe use of drills, advanced artificial nail applications, nail art and nail enhancements. Prerequisite: COS 113, 115. (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, ISFTY 111 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, ISFTY 111 or permission of department. (SCC)

COS 123 – Esthetics Concepts I (4 cr)

This course introduces students to the basic concepts of skin care, skin disorders and diseases of the skin. Chemistry for esthetics, bacteriology, sanitation and sterilization, and electricity and light therapy are emphasized. (SCC)

COS 124 – Esthetics Applications I (10 cr)

Students learn basic application techniques and obtain clinical practice on clients in facials, packs, masks, machine facials, massage, temporary superfluous hair removal, eyebrow arching, lash and brow tinting and artificial eyelashes. No more than 25 percent of all services are performed on models. (SCC)

COS 125 – Esthetics Concepts II (4 cr)

This course introduces students to advanced concepts of skin care, skin structure, color theory, makeup techniques and facials with the aid of machines. (SCC)

COS 126 - Esthetics Applications II (10 cr)

This course introduces students to intermediate application techniques and clinical practice on clients in facials, packs, masks, machine facials, massage techniques, temporary superfluous hair removal, eyebrow arching, lash and brow tinting, artificial eyelash application, make-up application and skin analysis. No more than 25 percent of the services are performed on mannequins. Prerequisite: COS 123, 124. (SCC)

COS 127 – Advanced Esthetics Concepts (1 cr)

This course provides students with advanced concepts required for success in a cosmetology setting. Advanced topics include body treatments and tinting of facial and body hair. Prerequisite: COS 123, 124. (SCC)

COS 129 – Advanced Manicuring Applications (2 cr)

Students are introduced to the advanced concepts of manicuring. Theories presented include the proper use of implements, cosmetics and materials used in manicures, pedicures, nail art and the application of artificial nails. Principles of bacteriology and sanitation methods are emphasized. Prerequisite: COS 113. (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 227 – Advanced Esthetics Applications (2 cr)

This course provides students with advanced practice required for success in a cosmetology setting. Students gain practice in advanced topics including body treatments and tinting of facial and body hair. Since this is an advanced application course, students are expected to complete the assigned projects in a given time with pre-established accuracy rates. Prerequisite: COS 123, 124, 125, 126, 127. (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 indepth 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 (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 284 – Special Projects (1 cr)

Students receive training in instructional methods. Course content varies depending upon the topics chosen. (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 (formerly ACCT 101) 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 (formerly ACCT 101) 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)

Formerly CJ 101. 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)

Formerly CJ 108. 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)

Formerly CJ 105. 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 (formerly CJ 101), 102, 104. (SCC)

CJ 132, 133, 241, 242, 243 — Criminal Justice Physical Training (1 cr ea)

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. (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 (formerly 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 (formerly 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. Prerequisite: Concurrent enrollment in PE 186 for audit. (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 265 — Service Learning Volunteer Project (2 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. Prerequisite: Concurrent enrollment in GENST 155. (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 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 113 - Introduction to the Food Service Industry (10 cr)

Students learn theory and practical applications in dining room service and procedures. All aspects of dining room service and management are addressed in a dining room setting. (SCC)

CUL 114 - Dining Room and Banquet Management (5 cr)

Theory and practical applications in the organization and management of dining rooms and banquets. (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 116 - Nutrition for Culinary Arts (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: CIS 115 or concurrent enrollment. (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 125 – Hospitality Purchasing (2 cr)

Students are introduced to the procedures used in the purchase of foods in quantity. The selection and procurement methods utilized in the hospitality industry are emphasized. (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 130 – Advanced Cooking Applications (7 cr)

Students learn practical applications in the methods used to create soups, sandwiches, salads and wrappers. (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 134 - Cooking Applications II (10 cr)

Students continue with the concepts introduced in CUL 123 with an emphasis on the creation of a buffet menu from concept through execution. The development of group leadership skills is addressed. (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: CUL 121 and concurrent enrollment in 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 262 – Dining Room Management (1 cr)

Introductory concepts in the organization and management of dining rooms 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

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. Pre-requisite: Successful completion of first year culinary coursework. (SCC)

CUL 266 — Cooperative Education Seminar (1-2 cr)

For course description, see Cooperative Education. (SCC)

CUL 267 – Cooperative Education Work Experience (1-4 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 123 - OSHA Refresher Course for Dental Personnel (1 cr)

This course is designed to provide updated information regarding OSHA regulations as they pertain to the dental profession. This course is offered as an on-line course only. (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)

DIAGNOSTIC MEDICAL SONOGRAPHY

SONO 111 - Diagnostic Ultrasound I (4 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. (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. (SCC)

SONO 125 – Ultrasound Physics and Instrumentation (5 cr)

This course emphasizes ultrasound physics, the physics of waves, sound transmission, attenuation, pulse wave principles, transducer and ultrasound systems operations. (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. (SCC)

SONO 135 - Ultrasound Physics and Instrumentation II (5 cr)

This course is a continuation of the concepts introduced in SONO 125. Ultrasound physics emphasizes the Doppler techniques, artifacts, bio utilizing instrumentation to investigate the principles of Doppler techniques and artifacts. (SCC)

SONO 141 – Diagnostic Ultrasound III (4 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. (SCC)

SONO 142 – Sonography Clinical Preparation (4 cr)

Basic scanning skills are developed by imaging normal's within the ultrasound laboratory; patient care skills are also included. The role and responsibilities of the sonographer and their job description is evaluated. Clinical requirements are defined and discussed. (SCC) 177

SONO 143 – Sonography Clinical Observation (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. (SCC)

SONO 251 – Advanced Sonography (9 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. (SCC)

SONO 253 – Sonography Clinical I (6 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. (SCC)

SONO 263 – Sonography Clinical II (13 cr)

Students practice clinical skills previously developed through active participation in a sonography 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 is on the clinical skills necessary to the performance and evaluation of the various sonography procedures to include abdomen, OB/GYN and small parts. Written reports, review of current literature and attendance at conferences is required. (SCC)

SONO 273 – Sonography Clinical III (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. (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 (8 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 (8 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 (5 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)

Formerly DRAMA 115. 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)

Formerly DRAMA 106. 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)

Formerly DRAMA 107. 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)

Formerly DRAMA 108. 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)

Formerly DRAMA 120. 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)

Formerly DRAMA 121. 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 (formerly DRAMA 106 or 120) or permission of instructor. (SFCC)

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DRMA 220 - Classical Acting (5 cr)

Formerly DRAMA 220. 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 (formerly DRAMA 115) or DRMA 120 or 121 (formerly DRAMA 120 or 121) or permission of instructor. (SFCC)

DRMA 221 – Acting for Film and Television (5 cr)

Formerly DRAMA 221. 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 (formerly DRAMA 115) or DRMA 120 or 121 (formerly DRAMA 120 or 121) or permission of instructor. (SFCC)

DRMA 230 - Stagecrafting Theatrical Design (1-5 cr)

Formerly DRAMA 230. 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)

Formerly DRAMA 233. 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)

Formerly DRAMA 266. For course description, see Cooperative Education. (SCC)

DRMA 267 – Cooperative Education Work Experience (1-18 cr)

Formerly DRAMA 267. 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 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 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

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. Forty-four hours of field experience are required. (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 266 - Cooperative Education Seminar (1-2 cr)

For course description, see Cooperative Education. (SFCC)

ECED 267 – Cooperative Education Work Experience (1-18 cr)

For course description, see Cooperative Education. (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)

180 ECED 283 – Practicum II (5 cr)

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)

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 (formerly ECON 201 or 202) should not enroll in ECON 100. (SCC, SFCC)

ECON& 201 – Micro Economics (5 cr)

Formerly ECON 202. 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 (formerly ECON 201) is recommended. (SCC, SFCC)

ECON& 202 – Macro Economics (5 cr)

Formerly ECON 201. 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

EDUC 100 – Exploring Teaching (5 cr)

Formerly ED 100. 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 120 - Survey of Core Competencies in Special Education (2 cr)

Formerly ED 120. This course provides training of the 14 core competencies for the special education paraprofessional. It is designed to fill emerging needs of the classroom or to recognize documented prior learning in the workplace. (SFCC)

EDUC& 202 - Intro to Education (5 cr)

Formerly ED 201. 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)

Formerly ED 204. 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)

Formerly ED 202. 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)

Formerly ED 205. 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)

Formerly ED 206. 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 (formerly ED 205) and permission of instructor. (SCC, SFCC)

EDUC 208 – Tutorial Practicum (1-2 cr)

Formerly ED 208. 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 (formerly ED 205) or EDUC 207 (formerly ED 206) and/or permission of instructor. (SCC, SFCC)

EDUC 252 – Social/Emotional Development (5 cr)

Formerly ED 252. 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 (formerly ED 204) or permission of instructor. (SFCC)

EDUC 266 - Cooperative Education Seminar (1-2 cr)

Formerly ED 266. For course description, see Cooperative Education. (SCC, SFCC)

EDUC 267 – Cooperative Education Work Experience (1-18 cr)

Formerly ED 267. For course description, see Cooperative Education. (SCC, SFCC)

EDUC 270 - Introduction to Developmental Disabilities (5 cr)

Formerly ED 270. 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 (formerly ED 204) or permission of instructor. (SFCC)

EDUC 275 – Learning Disabilities (5 cr)

Formerly ED 275. 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 (formerly ED 204) or permission of instructor. (SFCC)

EDUC 280 - Behavior/Classroom Management (5 cr)

Formerly ED 280. 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 (formerly ED 204) or permission of instructor. (SFCC)

EDUC 281 - Education/Special Education Practicum I (5 cr)

Formerly ED 281. 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: EDUC& 204 (formerly ED 204) or permission of instructor. (SFCC)

EDUC 282 - Education/Special Education Practicum II (5 cr)

Formerly ED 282. 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 (formerly ED 281). (SFCC)

ELECTRICAL MAINTENANCE AND AUTOMATION

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 96 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 singlephase 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 – Fundamentals of DC/AC Circuits (7 cr)

Students are introduced to DC/AC circuits including resistors and resistive circuits, series and parallel circuits, meter movements, ammeters, voltmeters, VOMs, DMMs and Wheatstone Bridges. (SCC)

ELECT 112 - DC/AC Circuit Lab (5 cr)

This course presents DC/AC circuit lab applications including resistors and resistive circuits, series and parallel circuits, meter movements, ammeters, voltmeters, VOMs, DMMs and Wheatstone Bridges. Prerequisite: Concurrent enrollment in ELECT 111 or department chair approval. (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 – Advanced DC/AC Circuits (9 cr)

This course addresses theory related to DC/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 – Advanced DC/AC Circuits Lab (5 cr)

This course introduces DC/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)

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182 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 134 — Printed Circuit Board/Surface Mount Technology Design and Repair (1 cr)

This course introduces the student to computer aided printed circuit board design (MultiSim and Ultiboard) and installation and removal techniques of surface mount technology. (SCC)

ELECT 136 - Solid State Devices and 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 and 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 and 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 and 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: 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: 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 TECHNICIAN (PARAMEDIC)

LIFE 129 – Emergency Medical Technician-Basic (10.3 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)

LIFE 130 - Intermediate Life Support (9 cr)

This course offers intermediate level training for emergency life support. Didactic sessions, skill development, and clinical experience focusing on shock and fluid therapy and respiratory support. Prerequisite: Must meet program prerequisites. (SCC)

LIFE 131 – Advanced Life Support I (14 cr)

This is the first in a series of four courses to prepare students for 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 the profession. Patient assessments, proper communication and documentation techniques, and 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: HED 108, 109 or BIOL& 241, 242 (formerly A-P 242, 243) and current Emergency Medical Technician Certification. (SCC)

LIFE 132 – Advanced Life Support II (15 cr)

This is the second in a series of four courses to prepare students for certification as EMT-P. Students are introduced to pharmacology, its applications and the role it plays in the treatment of injured patients. A brief introduction to the field of microbiology and how it affects patients is presented as well as the treatment and final outcome. Students gain an understanding of the measures necessary for the prevention of disease transmission. Extensive coverage of the cardiovascular system, its disease process and the treatment is emphasized. Interpretation of cardiac rhythms, both in the 3 and 12 lead modes, identification of rhythms that pose a threat to life and how to properly care for patients with cardiac illnesses are studied. Prerequisite: LIFE 131. (SCC)

LIFE 133 – Advanced Life Support III (18 cr)

This is the third in a series of four courses to prepare students for certification as EMT-P. Medical problems that paramedics may encounter are covered including neurological problems, medical emergencies, environmental injuries, psychiatric emergencies, etc. Special emergencies such as treatment of the neonatal newborn, pediatric and geriatric patients also are covered. Prerequisite: LIFE 132. (SCC)

LIFE 134 – Advanced Life Support IV (21 cr)

This is the final in a series of four courses to prepare students for certification as EMT-P. It 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 classes. Additional education in related fields including air-operations, medical incident command, rescue awareness, crime scenes and hazardous materials is emphasized. Prerequisite: LIFE 133. (SCC)

ENGINEERING

ENGR 103 - Engineering Graphics/CAD (5 cr)

This is a basic graphics course for engineers using manual and computeraided (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 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 191 – Microprocessor Architecture (5 cr)

An intensive laboratory course in the internal operation of microcomputers and their interfaces. Starting from an understanding of digital and analog electronics, the course covers all important computer circuits, timing and protocols. Students interface peripherals to a computer and build a process control system. Prerequisite: ENGR 190. (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 (formerly MATH 125) 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 (formerly MATH 126), 274 (may be taken concurrently), PHYS 202. (SFCC)

184 ENGLISH

ENGL 050 - ESL Writing (5 cr)

Formerly ENG 050. This course is for ESL students at the low-intermediate level whose writing skills require additional preparation before entering ENGL 061 (formerly ENG 061) or ENGL 071 (formerly ENG 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)

Formerly ENG 051. Small group or individual help in the basic skills of reading. Non-transferable. (SCC)

ENGL 052 – ESL Reading (5 cr)

Formerly ENG 052. This course is for ESL students at the low-intermediate level whose reading skills require additional practice before entering ENGL 062 (formerly ENG 062) or ENGL 072 (formerly ENG 072). Students work on vocabulary development and improving reading comprehension. (SFCC)

ENGL 053 - ESL Listening and Speaking (5 cr)

Formerly ENG 053. This course is for ESL students at the low-intermediate level whose reading skills require additional practice before entering ENGL 062 (formerly ENG 062) or ENGL 072 (formerly ENG 072). Students work on vocabulary development and improving reading comprehension. (SFCC)

ENGL 061 - ESL Writing (5 cr)

Formerly ENG 061. This course is for ESL students at the intermediate level whose writing skills require additional preparation before entering ENGL 071 (formerly ENG 071) or ENGL 081 (formerly ENG 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)

Formerly ENG 062. This course is for ESL students at the intermediate level whose reading skills require additional practice before entering ENGL 072 (formerly ENG 072) or ENGL 082 (formerly ENG 082). Students work on vocabulary development and improving reading fluency and comprehension. (SFCC)

ENGL 063 - ESL Listening and Speaking (5 cr)

Formerly ENG 063. This course is for ESL students at the intermediate level whose listening and speaking skills require additional practice before entering ENGL 073 (formerly ENG 073) or ENGL 083 (formerly ENG 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)

Formerly ENG 071. 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)

Formerly ENG 072. 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)

Formerly ENG 073. 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)

Formerly ENG 081. This course is designed for the ESL (English as a second language) student whose writing skills require additional preparation before entering ENGL 099 (formerly ENG 099) or ENGL& 101 (formerly ENG 101). (SCC, SFCC)

ENGL 082 — Reading and Study Skills for the ENS (English for the Non-native Speaker (5 cr)

Formerly ENG 082. 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)

See program/course abbreviation key on page 143.

ENGL 083 - ESL Conversation (5 cr)

Formerly ENG 083. 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 087 – Spelling Skills Development (3 cr)

Formerly ENG 087. A course designed for students interested in developing and strengthening their spelling skills. Students will learn mnemonic devices, homonyms and spelling rules. Regular quizzes will be given. (SFCC)

ENGL 090 – Reading and Study Skills (2 cr)

Formerly ENG 090. 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)

Formerly ENG 091. 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)

Formerly ENG 092. 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)

Formerly ENG 093. 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 (formerly ENG 094) or ENGL 151 (formerly ENG 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)

Formerly ENG 094. 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)

Formerly ENG 095. 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)

Formerly ENG 096. 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)

Formerly ENG 097. 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)

Formerly ENG 098. 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)

Formerly ENG 099. 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 (formerly ENG 097), appropriate placement score, or permission of instructor. (SCC, SFCC)

ENGL 100 – Composition Preparation (5 cr)

Formerly ENG 100. 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)

Formerly ENG 101. 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: Appropriate placement score or 2.0 in ENGL 099 (formerly ENG 099). (SCC, SFCC)

ENGL& 102 - Composition II (5 cr)

Formerly ENG 201. 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 (formerly ENG 101) with a 2.0 or better. (SCC, SFCC)

ENGL 104 – Grammar and Punctuation (3 cr)

Formerly ENG 112. Students review the traditional principles of grammar and punctuation and apply these principles. Prerequisite: Concurrent enrollment in ENGL& 101 (formerly ENG 101) or permission of instructor. (SCC, SFCC)

ENGL 105 – Pro/Tech: Basic Writing (5 cr)

Formerly ENG 105. 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 (formerly ENG 099) or permission of instructor. (SFCC)

ENGL 110 – Term Paper Workshop (2 cr)

Formerly ENG 110. 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 (formerly ENG 201) and ENGL& 235 (formerly ENG 205). (SCC)

ENGL& 111 – Intro to Literature (5 cr)

Formerly ENG 131. 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)

Formerly ENG 277. 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 (formerly ENG 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)

Formerly ENG 275. 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 (formerly ENG 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)

Formerly ENG 276. 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 (formerly ENG 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)

Formerly ENG 120. 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 (formerly ENG 189) with a 2.0 or better, or permission of English department chair. (SCC)

ENGL 150 — Academic Communication Skills for International Students (5 cr)

Formerly ENG 150. 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)

Formerly ENG 151. 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 (formerly ENG 093) or ENGL 094 (formerly ENG 094). Prerequisite: Recommended placement score : COMPASS 80 or above, ASSET 41 or above. (SCC, SFCC)

ENGL 152 - Reading Rate Improvement (2 cr)

Formerly ENG 152. 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)

Formerly ENG 153. 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 156 – Listening and Note-taking (1 cr)

Formerly ENG 156. Designed to be linked to a content area course, this course provides students the opportunity to develop listening skills and apply appropriate lecture note-taking strategies to help students understand and retain important content-area concepts. Memory principles are discussed and applied. Recommended COMPASS reading placement of 80 and above, ASSET score of 40 and above. This course cannot be taken simultaneously with ENGL 093 (formerly ENG 093) or ENGL 094 (formerly ENG 094). Credit will not be granted for both ENGL 151 (formerly ENG 151) and ENGL 156 (formerly ENG 156). Prerequisite: Recommended placement score of 80 or above on the COMPASS test. (SFCC)

ENGL 157 – Using Study Systems: Before, During, and After Reading (2 cr)

Formerly ENG 157. 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 (formerly ENG 093) or ENGL 094 (formerly ENG 094). Credit will not be granted for both ENGL 151 (formerly ENG 151) and ENGL 157 (formerly ENG 157). Prerequisite: Recommended placement score of 80 or above on the COMPASS test. (SFCC)

ENGL 158 - Test Preparation and Test-Taking (2 cr)

Formerly ENG 158. Designed to be linked to a content area course, this course examines effective before, during and after test-taking strategies for a specific content area. Students will learn, select and apply a variety of study aids. Principles of memory and time management will be applied to content-course test preparation. Recommended COMPASS reading placement of 80 and above, ASSET score of 40 and above. This course cannot be taken simultaneously with ENGL 093 (formerly ENG 093) or ENGL 094 (formerly ENG 094). Credit will not be granted for both ENGL 151 (formerly ENG 151) and ENGL 158 (formerly ENG 158). Prerequisite: Recommended placement score of 80 or above on the COMPASS test. (SFCC)

ENGL 188 – Introduction to Writing for Vocational Students (1-3 cr)

Formerly ENG 188. 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)

Formerly ENG 189. Provides instruction in basic writing concepts, including sentence structure, paragraphs and longer papers. It also reviews fundamentals of grammar, punctuation and spelling. (SCC)

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ENGL 195 — Special Topics in English for International Students (1-5 cr)

Formerly ENG 195. 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)

Formerly ENG 208. 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)

Formerly ENG 209. 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)

Formerly ENG 210. 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 (formerly ENG 101). SFCC only: recommended minimum reading placement score: COMPASS 80, ASSET 40. (SCC, SFCC)

ENGL& 235 – Technical Writing (5 cr)

Formerly ENG 205. 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 (formerly ENG 101) or permission of instructor. (SCC, SFCC)

ENGL& 236 - Creative Writing I (5 cr)

Formerly ENG 221. 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 (formerly ENG 101) or permission of instructor. (SCC, SFCC)

ENGL& 237 – Creative Writing II (5 cr)

Formerly ENG 222. This course teaches creative writing for intermediate writers. It is the logical continuation of ENGL& 236 (formerly ENG 221); 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 (formerly ENG 221) or permission of instructor. (SCC, SFCC)

ENGL 238 – Advanced Expository Writing (5 cr)

Formerly ENG 225. This class is a logical extension of ENGL& 101 (formerly ENG 101) and ENGL& 102 (formerly ENG 201), going beyond rhetorical modes and research skills to explore and practice the longer essay. Prerequisite: ENGL& 101 (formerly ENG 101), ENGL& 102 (formerly ENG 201). (SCC, SFCC)

ENGL 241 - The Bible as Literature (5 cr)

Formerly ENG 241. 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)

Formerly ENG 247. 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)

Formerly ENG 245. 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)

Formerly ENG 246. 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)

Formerly ENG 251. 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)

Formerly ENG 226. 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)

Formerly ENG 227. A continuation of the concepts introduced in ENGL 254 (formerly ENG 226) 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 (formerly ENG 226). (SCC)

ENGL 261 - Twentieth Century Novel (5 cr)

Formerly ENG 261. 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)

Formerly ENG 266. For course description, see Cooperative Education. (SCC)

ENGL 267 - Cooperative Education Work Experience (1-18 cr)

Formerly ENG 267. For course description, see Cooperative Education. (SCC)

ENGL 271 – World Literature to 1650 (5 cr)

Formerly ENG 271. 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 (formerly ENG 101). SFCC only: recommended minimum reading placement score: COMPASS 80, ASSET 40. (SCC, SFCC)

ENGL 272 - World Literature since 1650 (5 cr)

Formerly ENG 272. 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 (formerly ENG 101). SFCC only: recommended placement score: COMPASS 80, ASSET 40. (SCC, SFCC)

ENGL 278 – Women Writers (5 cr)

Formerly ENG 278. 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 294 – Special Topics in Writing (2-5 cr)

Formerly ENG 294. The course's content varies from quarter to quarter according to designation and credits filed in advance of each scheduling. Students may repeat the course for credit with different topics. Prerequisite:

ENGL& 101 (formerly ENG 101), grade of 2.0 or above; or permission of instructor. (SCC, SFCC)

ENGL 295 – Special Studies in Literature (2-5 cr)

Formerly ENG 295. 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 (formerly ENG 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)

Formerly ECOL 101. 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)

Formerly ENVSC 101. 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)

Formerly ENVSC 110. 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)

Formerly ENVSC 207. This course provides students with the basic principles of wildlife ecology, habitat, population dynamics, behavior and management practices. (SCC)

ENVS 210 - Environmental Soil Science (5 cr)

Formerly ENVSC 210. 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)

Formerly ENVSC 211. 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)

Formerly ENVSC 217. This course builds on the basic ecology skills developed in NATRS 207 and focuses on applied sampling theory, field approaches, and practical applications relative to fish and wildlife habitat and population sampling methods. (SCC)

ENVS 218 — Environmental Science Conservation Planning (3 cr)

Formerly ENVSC 218. 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)

Formerly ENVSC 227. This course builds on the basic ecology skills developed in NATRS 207 and sampling skills developed in ENVS 217 (formerly ENVSC 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 207, 217 (formerly ENVSC 207, 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 112 – 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 160 — Merchandise Presentation (5 cr)

Learn to see retail stores as a professional sees them. Instruction in basic terminology, design principles, signing and graphics, and the use of mannequins is combined with practical experience in creating displays that sell. (SFCC)

FMDSE 161 – Merchandise Trends (3 cr)

Tune into the current merchandise trends in retail. Explore the world of fashion and its effect on what you see in today's stores. Lectures and discussions on the subjects of clothing, famous designers, brand names, home furnishings and publications. (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 (formerly GBUS 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)

188 FINANCIAL SERVICES/TELLER

BANK 101 - Introduction to Banking Industry (4 cr)

The course provides students with a broad overview of the banking industry including different kinds of institutions, forms, policies and procedures, and duties and responsibilities of bank tellers. (SCC)

BANK 102 – Professional Standards in Banking (1 cr)

The course discusses and explains professional standards for a bank teller including dress code, human relations and attitudes. (SCC)

BANK 103 – Introduction to Teller Operations (4 cr)

This course discusses teller operations. Emphasis is placed on handling money and working with checks, savings and checking accounts, and negotiable instruments. Selling and cross-selling techniques are discussed before students role play. (SCC)

BANK 104 – Teller Operations Applications (3 cr)

This course gives hands-on teller applications. Emphasis is placed on balancing cash drawers, using PC-based computer software to record various banking transactions, operating 10-key calculators to gain 10-key-by-touch skills and accessing information on the Internet. (SCC)

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. Pre-requisite: 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)

See program/course abbreviation key on page 143.

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 — Hazardous Waste Operations and Emergency Response (3 cr)

The Occupational Safety and Health Administration (OSHA) requires that all employees working and handling hazardous waste be provided with a minimal amount of safety training. Course content meets and/or exceeds the guidelines as regulated by 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)

Formerly FRNCH 101. 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)

Formerly FRNCH 102. 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 (formerly FRNCH 101) or one year of high school French or permission of instructor. (SCC, SFCC)

FRCH& 123 — French III (5 cr)

Formerly FRNCH 103. 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 (formerly FRNCH 102) or one and one-half years of high school French or permission of instructor. (SCC, SFCC)

FRCH& 221 — French IV (5 cr)

Formerly FRNCH 201. 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, audiotapes, magazines and various other media, and daily practice outside of class. Prerequisite: FRCH& 123 (formerly FRNCH 103) or permission of instructor. (SCC, SFCC)

FRCH& 222 - French V (5 cr)

Formerly FRNCH 202. 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, audiotapes, magazines and various other media, and daily practice outside of class. Prerequisite: FRCH& 221 (formerly FRNCH 201) or permission of instructor. (SCC, SFCC)

190 FRCH& 223 – French VI (5 cr)

Formerly FRNCH 203. 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, audiotapes, magazines and various other media, and daily practice outside of class. Prerequisite: FRCH& 222 (formerly FRNCH 202) or permission of instructor. (SCC, SFCC)

FRCH 241 - Conversation and Culture (2 cr)

Formerly FRNCH 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 (formerly FRNCH 103) or permission of instructor. (SCC, SFCC)

FRCH 266 - Cooperative Education Seminar (1-2 cr)

Formerly FRNCH 266. For course description, see Cooperative Education. (SCC)

FRCH 267 – Cooperative Education Work Experience (1-18 cr)

Formerly FRNCH 267. 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. (SCC, SFCC)

FSCI 102 – Interdisciplinary Science (5 cr)

This is the second of a three-quarter sequence of classes for non-science majors. An integrated science course that involves physics, chemistry, and geology. The course will examine themes such as climate with respect to global change. 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, chemistry, and geology. Students will maintain a laboratory notebook and formally present data to peers throughout the course. Prerequisite: FSCI 101. (SCC, SFCC)

FSCI 103 – Interdisciplinary Science (5 cr)

This is the third of a three-quarter sequence of classes for nonscience majors. An integrated science course that involves biology, ecology, physics, and chemistry. Introduction to cellular, organismal and ecosystem biology, including human systems, for students majoring in elementary education. Includes inquiry-based biological investigations that support science instruction outlined in the National Science Education Standards and Washington Essential Academic Learning Requirements. Prerequisite: A 2.0 in FSCI 102 or permission of the instructor. (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 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 110 - Critical Thinking in Women's Studies (2 cr)

A survey course identifying barriers women have faced throughout history; the ways different cultures have bound women to a narrow range of options because of attitudes, beliefs, customs and traditions; and how laws have been used to maintain and perpetuate women's vulnerability to abuse and poverty. By critically thinking about the economics of being a woman, and by learning effective skills in interpersonal relationships, individual women and men can develop ways to overcome prejudice. (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 130 - Life Perspectives Seminar (1 cr)

A broad spectrum of topics are presented by a variety of speakers focusing on the relationship between the individual and local, regional, national and global issues. Subjects assist students in awareness of self and others, as well as in values clarification. (SCC, SFCC)

GENST 131 - Life Perspectives Seminar (1 cr)

A broad spectrum of topics are presented by a variety of speakers focusing on the relationship between the individual and local, regional, national and global issues. Subjects assist students in awareness of self and others, as well as in values clarification. (SCC, SFCC)

COURSE DESCRIPTIONS

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 201 – Survey of Environmental Issues (5 cr)

Interdisciplinary nature of environmental problems including fundamentals of ecology; environmental issues such as population, food production, forest resources, mineral resources energy resources and urban-industrial development; and future direction in cultural values. (SCC-telecourse only) (SFCC)

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 (formerly ENG 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 (1-5 cr)

The course offers students an opportunity through reading and discussion to deal with topics and ideas not normally covered in the classes presently offered. These topics and ideas are generally broader in scope and often overlap in four or five areas. Topics cover concepts to the basic foundation of liberal arts. This seminar deals with basic concepts through discussion and readings necessary for the development of a liberally educated mind. Exceptional students probe horizons of the collegial atmosphere in their quest of a liberal education. Students and faculty sit together and share concepts that affect our notion of the world around us. The course is restricted to the student who is looking for more than what is offered in the normal curriculum, and who demonstrates the motivation toward

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), land slides, 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)

Formerly GEOL 115. 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 (formerly GEOL 101) and GEOL& 100 (formerly GEOL 115). This is a physical science course. (SCC, SFCC)

GEOL& 101 – Intro Physical Geology (5 cr)

Formerly GEOL 101. 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 (formerly GEOL 101) and GEOL& 100 (formerly GEOL 115). (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 (formerly ENG 098). (SCC, SFCC)

GEOL 116 – Environmental Geology (4-5 cr)

Formerly GEOL 110. 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)

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 (formerly GEOL 101), 100 (formerly GEOL 115) 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)

Formerly GERMN 101. Introduction to German culture with emphasis on conversation with some writing. (SCC, SFCC)

GERM& 122 - German II (5 cr)

Formerly GERMN 102. Introduction to German culture with emphasis on conversation with some writing. Prerequisite: GERM& 121 (formerly GERMN 101) or equivalent. (SCC, SFCC)

GERM& 123 - German III (5 cr)

Formerly GERMN 103. Introduction to German culture with emphasis on conversation with some writing. Prerequisite: GERM& 122 (formerly GERMN 102) or equivalent. (SCC, SFCC)

GERM 141 - German Conversation and Culture (5 cr)

Formerly GERMN 141. 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, SFCC)

GERM& 221 - German IV (5 cr)

Formerly GERMN 201. This is a review of German grammar, supplemented by films and slides from the Consulate General of the Federal Republic of Germany. Prerequisite: GERM& 123 (formerly GERMN 103) or equivalent. (SCC, SFCC)

GERM& 222 - German V (5 cr)

Formerly GERMN 202. This course covers conversation based upon current newspaper and magazine articles. Composition based upon classics of German literature. Prerequisite: GERM& 221 (formerly GERMN 201) or equivalent. (SCC, SFCC)

GERM& 223 - German VI (5 cr)

Formerly GERMN 203. Emphasis upon composition, analysis of short essays and stories representative of important aspects of German culture are covered in this course. Prerequisite: GERM& 222 (formerly GERMN 202) or equivalent. (SCC, SFCC)

GERM 241 - German Conversation and Culture (5 cr)

Formerly GERMN 241. 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, SFCC)

GERM 266 - Cooperative Education Seminar (1-2 cr)

Formerly GERMN 266. For course description, see Cooperative Education. (SFCC)

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)

HSGER 281 – Practicum I (5 cr)

This course is an overview of the practicum experience. Classroom experience focuses on the concepts of individualized learning goals; agency; instructional supervision; mutual practicum responsibilities; and privileges of student, agency and college. Students spend observational time in three different agencies. Sharing these experiences with the total class provides an overview of the network of elderly services and later field practicum potentials. Prerequisite: One year of gerontology courses prior to practicum. (SFCC)

HSGER 282 – Practicum II (5 cr)

Students spend 132 hours working in an assigned agency in this course. Student's contract with agency specify duties and tasks that provide an opportunity to complete student's individualized learning goals. The agency assigns one member of its professional staff to supervise the student. Agency supervisor provides agency-specific instruction for the student and monitors student performance. Assigned college faculty regularly consults with agency supervisor and student regarding learning opportunities, student's progress, and application of classroom material to practicum experience. Prerequisite: HSGER 281. (SFCC)

HSGER 283 - Practicum III (5 cr)

This course is a continuation of HSGER 282. Students spend 132 hours working in an assigned agency. Student's contract with agency specify specific duties and tasks that provide an opportunity to complete student's individualized learning goals. Agency assigns one member of its professional staff to supervise the student. Agency supervisor provides agency-specific instruction for the student and monitor student performance. Assigned college faculty regularly consults with agency supervisor and student regarding learning opportunities, student's progress, and application of classroom material to practicum experience. Prerequisite: HSGER 282. (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)

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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 (2 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: Assessment reading score on the Compass of 80 or above or an ASSETT reading score of 40 or above and concurrent enrollment in GRDSN 102,103,104,105 or permission of instructor. (SFCC)

GRDSN 102 – Design Technology I (2 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 projects in GRDSN 103. Content includes operation of page layout, drawing and scanning software applications. 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, 103, 104, 105 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 and 104. 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, 104, 105 or permission of instructor. (SFCC)

GRDSN 104 – Design Lab I (2 cr)

In this course, students perform the computer production of projects assigned in GRDSN 103. Focus is on developing and demonstrating self-directed learning strategies. This is a learner-centered, open lab environment in which developing and demonstrating self-directed learning strategies are emphasized. Students are assessed and graded on demonstrating positive work ethic, effective time management, and efficient use of technology. This lab course is facilitated by graphic design faculty. 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, 103, 105 or permission of instructor. (SFCC)

GRDSN 105 – Drawing for Graphic Designers (2 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 **193** of the course. (SFCC)

GRDSN 109 - History of Design (4 cr)

This is a competency-based course that focuses on major design movements as they relate to visual communication. Beginning with the invention of writing and continuing to the 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 ASSETT reading score of 40 or above. (SFCC)

GRDSN 111 - Design Process II (2 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. Students apply learned skills to the completion of more complex projects in GRDSN 113. Prerequisite: GRDSN 101, 102, 103, 104 and concurrent enrollment in GRDSN 112, 113, 114, 115 or permission of instructor. (SFCC)

GRDSN 112 – Design Technology II (2 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: GRDSN 101, 102, 103, 104 and concurrent enrollment in GRDSN 111, 113, 114, 115 or permission of instructor. (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 and 114. Prerequisite: GRDSN 101, 102, 103, 104 and concurrent enrollment in GRDSN 111, 112, 114, 115 or permission of instructor. (SFCC)

GRDSN 114 – Design Lab II (2 cr)

Students perform the computer production of projects assigned in GRDSN 113. Focus is on demonstrating a positive productive work ethic in a learnercentered, open lab. Students are assessed and graded on demonstrating self-directed learning, demonstrating effective time management and efficient use of technology. This lab course is facilitated by graphic design faculty. Prerequisite: GRDSN 101, 102, 103, 104 and concurrent enrollment in GRDSN 111, 112, 113, 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 (2 cr)

In this course, the design process is applied 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. This course addresses skills necessary to complete the projects in GRDSN 123. Prerequisite: GRDSN 101 or permission of instructor and concurrent enrollment in GRDSN 122, 123, 124 or permission of instructor. (SFCC)

GRDSN 122 – Design Technology III (2 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. Students learn software skills necessary to complete projects in GRDSN 123. Prerequisite: GRDSN 102 or permission of instructor and concurrent enrollment in GRDSN 121, 123, 124 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 and 124. Prerequisite: GRDSN 103 or permission of instructor and concurrent enrollment in GRDSN 121, 122, 124 or permission of instructor. (SFCC)

GRDSN 124 - Design Lab III (2 cr)

Students perform the computer production of projects assigned in GRDSN 123. Efficient job planning and time management is stressed. Students are assessed and graded on demonstrating self-directed learning and efficient use of technology. This lab course is facilitated by graphic design faculty. Prerequisite: GRDSN 104 or permission of instructor and concurrent enrollment in GRDSN 121, 122, 123 or permission of instructor. (SFCC)

GRDSN 125 — Computer Drawing (2 cr)

This course builds on the skills obtained in GRDSN 105 and GRDSN 115. 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 and GRDSN 115 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 131 – Publication Design (1 cr)

This is an introductory course in publication design. In this course the basic principles of layout, typography, color and images are discussed. Industry terminology, job titles, and problem solving methods are introduced. This course contains page layout projects developed both on paper and through the use of computer software. Prerequisite: Assessment reading score of 40 or above, or instructor permission and concurrent enrollment in GRDSN 135 for 1 credit. (SFCC)

GRDSN 132 – Publication Production (2 cr)

This course is an introductory course to the technology used to produce printed publications with computer software. This course focuses on commercial printing workflow; layout, prepress file preparation, printing processes, and printing papers. The basic operation of computer applications, and management of digital images is emphasized. Prerequisite: Assessment reading score of 40 or above, or instructor permission and concurrent enrollment in GRDSN 135 for 2 credits. (SFCC)

GRDSN 133 - Graphic Reproduction (2 cr)

This is an intermediate level course in image manipulation and preparation for press reproduction. Focus is on adjusting, manipulating, compositing, and repairing images acquired by scanners and digital cameras. Adobe Photoshop is used to explore techniques for selection of image areas, masking, levels and curves controls, combination of layers and the use of painting tools. Emphasis is on correcting tones, colors for printed output and applying color management techniques to ensure repeatable color control. Prerequisite: GRDSN 132 and assessment reading score of 40 or above, or instructor permission and concurrent enrollment in GRDSN 136 for 2 credits. (SFCC)

GRDSN 135 – Print Production Laboratory I (1-5 cr)

This introductory course is designed to support the computer production of projects assigned in GRDSN 131 or 132. This is a learner-centered, open lab environment in which developing and demonstrating self-directed learning strategies are emphasized. This lab course is facilitated by graphic design faculty. May repeat for up to 5 credits. Prerequisite: Assessment reading score of 40 or above, or instructor permission. (SFCC)

GRDSN 137 - Print Production Laboratory III (1-5 cr)

This advanced course is designed to support the computer production of projects assigned in GRDSN 151 or 152. This is a learner-centered, open lab environment in which developing and demonstrating self-directed learning strategies are emphasized. This lab course is facilitated by graphic design faculty. May repeat for up to 5 credits. Prerequisite: Assessment reading score of 40 or above, or permission of instructor. (SFCC)

GRDSN 141 – Type and Layout (1 cr)

This is an intermediate level course in design and typography. This course contains reference materials, tutorial exercises and hands-on projects. Projects focus on visual organization, stylized information, and effective page layouts. Emphasis is on clearly communicating to an audience. Projects employ images, formatting styles, grid systems and design principles as methods of communicating with a clear organizational structure. Prerequisite: GRDSN 131 and assessment reading score of 40 or above, or instructor permission and concurrent enrollment in GRDSN 136 for 1 credit. (SFCC)

GRDSN 142 - Print Production (2 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 122. (SFCC)

GRDSN 151 – Typography and Design (1 cr)

This is an advanced course in publication design. The course focuses on text-intensive publications (newsletters, newspapers, corporate brochures, financial reports). Projects focus on design and typography skills to communicate complex information clearly and effectively. Layouts are enhanced with expressive use of color, images and printing techniques. Projects develop composition skills using industry-standard computer applications. Prerequisite: GRDSN 141 and assessment reading score of 40 or above, or permission of instructor and concurrent enrollment in GRDSN 137 for 1 credit. (SFCC)

GRDSN 152 – Prepress Production (2 cr)

This is an advanced level competency-based course in computer graphics and printing technology. Emphasis is on computer applications, color management, file preparation, paper specification, pre-press workflow, page imposition, proofing, trapping, PDF workflow, RIP technology, file automation, font and image management, emerging technology, and graphic markets. Requires concurrent enrollment in 2 credits of GRDSN 137. Prerequisite: GRDSN 133 and 142 and assessment reading score of 40 or above, or permission of instructor and concurrent enrollment in GRDSN 137 for 2 credits. (SFCC)

GRDSN 155 - FreeHand I (2 cr)

This is a self-paced, competency-based, introductory course to FreeHand 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 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 157 – QuarkXPress I (2 cr)

This is a self-paced, competency-based, introductory course to QuarkXPress software for Macintosh computers. Through reference materials, tutorial exercises and projects, students use software tools and menu commands to integrate text and graphics in a variety of page layouts. Students apply fundamental typesetting skills to format a variety of text elements, including display type, text, captions and subheads. Students also work with color and manipulate placed graphics. (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 159 – Strata 3-D (2 cr)

This is a self-paced competency-based introductory course to Strata 3-D software for macintosh computers. Through reference materials, tutorial exercises and projects, students use tools and menu commands to create scenes with three-dimensional objects and text. Students create a variety of objects, backgrounds and environmental effects to render a scene. Textures, lighting and cameras also will be addressed. Rendered scenes will be suitable for use on the internet, multimedia presentations and in page layout design. (SFCC)

See program/course abbreviation key on page 143.

COURSE DESCRIPTIONS

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 161 - Powerpoint (2 cr)

This course offers self-paced, competency-based, instruction in PowerPoint, a business presentation program for Macintosh computers. Through reference materials, tutorial exercises and projects, students use software tools and menu commands to create a digital business presentation. Students import files created in other software programs, create text, and format a presentation appropriate for individuals or groups. (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 165 – QuarkXpress II (2 cr)

This is a self-paced, competency-based, advanced course in QuarkXPress software for Macintosh computers. Through reference materials, tutorial exercises and projects, students use software tool and menu commands to structure layouts and work with text and graphics. Work with advanced text formatting and the application of style sheets will speed work. Managing workflow and output are covered. Also covered is working with lengthy documents. (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 169 - MS Word (2 cr)

This is a self-paced, competency-based introduction to Microsoft Word, a word processing program, and is oriented toward Macintosh computer users. Through reference materials, tutorial exercises and projects, students use software tools and menu commands to create, format and edit text. Students work with tables, clip art, printing and merged letters. (SFCC)

GRDSN 170 - MS Excel (2 cr)

This is a self-paced, competency-based introduction to Microsoft Excel, a spreadsheet program, and is oriented toward Macintosh computer users. Through reference materials, tutorial exercises and projects, students use software tools and menu commands to create and format spreadsheets for business and personal use. Students enter text, perform calculations, use functions, work with multipage documents and print results. (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. 195 (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 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 (2 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. GRDSN 101 and 111 address the skills necessary to complete the projects assigned in GRDSN 203. Prerequisite: GRDSN 121 or permission of instructor and concurrent enrollment in GRDSN 203, 204 or permission of instructor. (SFCC)

GRDSN 202 – Design Technology IV (2 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 and concurrent enrollment in GRDSN 201, 203, 204 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 (4 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: GRDSN 124 or permission of instructor and concurrent enrollment in GRDSN 201, 203 or permission of instructor. (SFCC)

GRDSN 211 – Design Process V (2 cr)

Working with real-world design problems, students in this course apply their expertise in developing design solution for various media. Emphasis is on organizing information, typography and imagery to create clear, creative design solutions. Through problem-solving activities, students develop an increased awareness of graphic design principles and skills. Prerequisite: GRDSN 201, 202, 203, 204 or GRDSN 126, 238, IS 126, 143 and concurrent enrollment in GRDSN 212, 213, 214 or permission of instructor. (SFCC)

GRDSN 212 – Design Technology V (2 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 201, 202, 203, 204 or GRDSN 126, 238, IS 126, 143 and concurrent enrollment in GRDSN 211, 213, 214 or permission of instructor. (SFCC)

GRDSN 213 – Design Projects V (1 cr)

From concept to final presentation, students in this course apply advancedlevel 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, IS 126, 143 and concurrent enrollment in GRDSN 211, 212, 214 or permission of instructor. (SFCC)

GRDSN 214 – Design Lab V (4 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 GRDSN 126, 238, IS 126, 143 and concurrent enrollment in GRDSN 211, 212, 213 or permission of instructor. (SFCC)

GRDSN 215 – Web Process V (2 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, 124 and concurrent enrollment in GRDSN 216, 217, 218. (SFCC)

GRDSN 216 – Web Technology V (2 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, 124 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 advancedlevel 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, 124 and concurrent enrollment in GRDSN 215, 216, 218. (SFCC)

GRDSN 218 – Web Lab V (4 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, 124 and concurrent enrollment in GRDSN 215, 216, 217. (SFCC)

GRDSN 221 – Design Process VI (2 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 more 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 211 or permission of instructor and concurrent enrollment in GRDSN 223, 224 or permission of instructor. (SFCC)

GRDSN 223 – Design Projects VI (1 cr)

Students design and produce projects for their portfolios in this course. In addition, earlier student work is assessed and revised to bring it up to portfolio standards. Projects are assigned, assessed at mid-point and critiqued when finished. The design process and lab time for these projects are delivered in GRDSN 221 and 224. Prerequisite: GRDSN 213 or permission of instructor and concurrent enrollment in GRDSN 221, 224 or permission of instructor. (SFCC)

GRDSN 224 – Design Lab VI (4 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)

See program/course abbreviation key on page 143.

GRDSN 225 - Web Process VI (2 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 (1 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 (4 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 231 – Advertising Design (4 cr)

In this course students study the operation of the advertising agency and its art department. Students become familiar with the roles of the creative director, art director, designer, account executive, copy writer, media buyer and production artist in an agency environment. Focus is on the concept, design and production of pieces for advertising media including newspaper, magazine, outdoor, television and the process of working within the structure of the creative advertising agency team. Conceptual work relies heavily on market research to help determine the client's need, market position, comparison to competitors, media and advertising budget. Students create concepts, write headlines and copy, produce ad layouts and comprehensives, and television storyboards. Students also gain experience in art directing other creative team members such as designers, photographers and illustrators, producing their own designs, photographs and illustrations. Prerequisite: GRDSN 201, 202, 203, 204. (SFCC)

GRDSN 232 – Perspective Drawing for Designers (3 cr)

This course familiarizes students with the principles of perspective and their practical applications. Students learn one-, two-, and three-point perspective by using the principles of geometry to develop spatial logic. Students apply learned procedure, technique and perspective theory to create illustrations that develop painting skills. Students apply perspective to produce precise product illustrations with the technical tools used by professionals. Each student creates a perspective notebook for future reference. Prerequisite: GRDSN 121, 122, 123, 124. (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 Technology II (3 cr)

This is an intermediate-level course on interactive media. Students build on GRDSN 235 to learn more complex design and technical skills 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 235 or permission of instructor. (SFCC)

GRDSN 237 – Multimedia Technology III (3 cr)

This is an advanced-level course on interactive media. Students learn complex design and technical skills 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 scripting interactivity and animation. Prerequisite: GRDSN 235, 236 or permission of instructor and concurrent enrollment in GRDSN 122. (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 ob-

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jects 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)

GRDSN 277 - Illustration Workshop (4 cr)

One third of this course is spent investigating the possibilities of full-color graphic illustration and creating an illustration in that style. The remaining two-thirds of the class emphasizes encouraging students to develop an individual style and choosing media appropriate to the solution of a given problem. Students use visual and conceptual skills in their own work problem-solving process. Professionalism and the study of contemporary illustrators and their work are very important. The work produced in this class make strong portfolio pieces. Prerequisite: GRDSN 201, 202, 203 or permission of instructor. (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 101 - Nutrition (3 cr)

Students learn basic nutrition including life cycle needs, nutrient sources and functions, food preferences and customs. (SCC)

HED 102 - Survey of Health Careers (2 cr)

Students gather information regarding selected health careers by interacting with health professionals active in the field, visiting sites to observe the application of their career choice, making informed decisions regarding their personal choice of health career based on aptitude and interest, and expressing values and feelings leading to their career choice. (SCC)

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 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 110 - Health Care Delivery Systems (3 cr)

This course provides a broad concept of how health care is organized, financed and delivered in the U.S. Students study interrelationships of facilities, agencies, health organizations and hospitals. The role of the government is the regulation of health care is emphasized. (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 (formerly A-P 242, 243) and HED 125 or HED 108. (SCC)

HED 130 – Positive Image Building (2 cr)

Students discuss concepts and participate in exercises relating to self-esteem building, effective goal setting, constructive interpersonal communication. They apply these concepts toward maximizing personal potential and self-health maintenance. (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 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 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 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. Prerequisite: HIT 125 or permission of instructor. (SCC)

198 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 Systems (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. 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 problemsolving 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 RECORD CLERK

HRC 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)

HRC 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)

HRC 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)

HRC 108 - Human Anatomy (5 cr)

Students study the structure of the human body including integumentary, special senses, skeletal, muscular, respiratory, hemopoietic, cardiovascular, lymphatic, digestive, urinary, reproductive, endocrine and nervous systems. (SCC)

HRC 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)

HRC 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 HRC 108 or 125. (SCC)

See program/course abbreviation key on page 143.

HRC 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: HRC 101. (SCC)

HRC 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)

HRC 150 - Health Record Clerk Directed Practice (3 cr)

This course includes a clinical seminar to prepare students for clinical practice in the work environment and directed clinical practice in a health care setting. Students learn job-readiness skills, professionalism, work ethic, leadership training, and safety and occupational health. Directed practice provides practical application of classroom coursework. Prerequisite: Successful completion of first- and second-quarter classes with a 2.0 grade or better. (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 – Exercise and Aging (3 cr)

The senior and older adult population is fast becoming the largest segment of the fitness industry. Fitness professionals need to be aware of the aspects of exercise prescription unique to the older client. This course analyzes the physiological characteristics of the older adult that apply to exercise program development. The course examines physical limitations such as balance, strength, flexibility, disease, osteoporosis and the effects of certain medications. There is a combination of lecture and lab hours designed to develop "hands-on" knowledge of exercise technique, as well as exercise theory. (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 (3 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 (5 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 (3 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)

200 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 (4 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 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 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: Permission of instructor. (SFCC)

HIS 134 – Advanced Audiometrics (4 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 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 – Earmolds and ALDS (4 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: 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 (4 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. (SFCC)

HIS 206 - Hearing Instrument Specialist Laboratory I (3 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: 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: 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: 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 206 and 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 210 and 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. (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

COURSE DESCRIPTIONS

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)

See program/course abbreviation key on page 143.

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)

AIRC 288 — Cooperative Education Work Experience (No Seminar) (1-18 cr)

For course description, see Cooperative Education. (SCC)

HISTORY

HIST 110 – British Life and Culture (5 cr)

British life and culture is an interdisciplinary course designed to give students a broad overview of British culture and civilization. It takes a social, historical and cultural approach to contemporary British society. This course includes lectures given by adjunct British faculty, supporting seminars and related field trips to such places as the Museum of London, the Globe Theatre, the National Gallery and the House of Parliament. Note: Credit may not be earned for both HUMAN 205 and HIST 110. Prerequisite: SFCC recommended minimum reading placement score: COMPASS 80, ASSET 40. (SFCC)

HIST& 116 – Western Civilization I (5 cr)

Formerly HIST 101. 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)

Formerly HIST 102. 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)

Formerly HIST 103. 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)

Formerly HIST 121. 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 Replublic and the sectional crisis. Prerequisite: SFCC recommended minimum reading placement score: COMPASS 80, ASSET 40. (SCC, SFCC)

HIST& 137 – US History 2 (5 cr)

Formerly HIST 122. 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. Prerequisite: SFCC recommended minimum reading placement score: COMPASS 80, ASSET 40. (SCC, SFCC)

HIST 141 – History of China (5 cr)

Preparation for advanced-level courses in Chinese civilization; an understanding of the people of China, their traditions, development and histories. Prerequisite: SFCC recommended minimum reading placement score: COMPASS 80, ASSET 40. (SFCC)

HIST 142 – History of Japan (5 cr)

Preparation for advanced-level courses in Japanese history; an understanding of the people of Japan, their traditions, development and histories. Prerequisite: SFCC recommended minimum reading placement score: COMPASS 80, ASSET 40. (SFCC)

HIST& 214 – Pacific NW History (5 cr)

Formerly HIST 260. 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)

Formerly HIST 140. 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 237 - History of Australasia: Australia and New Zealand (5 cr)

Examines the history of the Australasian nations of Australia and New Zealand about 1,200 years ago, through the long and often difficult process of becoming the modern island nations of Australia and New Zealand. Attention is given to the various groups that have migrated to Australasia, exploration and colonization of the area, development of settlements and colonial governments, the move toward nationhood, and emergence of the modern nations of Australia and New Zealand in the 20th Century. Prerequisite: College-level reading and writing skills recommended (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, English 201 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 131 – A la Carte Service (9 cr)

This course addresses theory and practical applications in the methods used to provide exceptional a la carte service at a variety of functions. (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 150 - Basic Foods (5 cr)

Students study theory and practical applications in the production of quality foods in quantity. (SCC)

See program/course abbreviation key on page 143.

HM 151 - Restaurant Management (3 cr)

Students are introduced to the food and beverage operation of hotels and motels. (SCC)

HM 153 – Restaurant Service (2 cr)

Students are introduced to the operation of a typical restaurant in a lab setting. Practical aspects of restaurant service are emphasized. Prerequisite: Concurrent enrollment in HM 151. (SCC)

HM 155 - Hospitality Purchasing (2 cr)

Students are introduced to the procedures for purchasing foods in quantity with emphasis on the selection and procurement methods utilized in the hospitality industry. (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

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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 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 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 150 - Foster Care (1-5 cr)

A comprehensive parenting course designed specifically for foster parents. It is taught in a relaxed, friendly manner that allows for maximum interaction enabling foster parents to get answers to their day-to-day questions. Specific topics covered include building the child's self-concept, human growth and development, awareness of culture needs, and permanency. Special attention is given to issues of discipline and modifying children's behavior. Working with the child welfare system, and dealing with stress and burnout also are explored. (SFCC)

HS 151 – Independent Living Readiness Training (3 cr)

To prepare foster parents and social service staff to assist the adolescent who lacks the support of a stable family environment in making the transition to living independently. The three main objectives are to increase ability to assess youth's willingness and ability to prepare for independence; to increase skills in promoting the readiness of youth for independent living; and to increase knowledge and familiarity of community resources. Prerequisite: HS 150. (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 238 – Group Effectiveness Training (5 cr)

Provides students with understandings of and experiences in group interaction. Concepts to be explored include group content and process, leadership styles, and how to begin, maintain and analyze functional groups. Prerequisite: HS 136 or permission of instructor. (SFCC)

HS 277 – Human Sexual Development (3 cr)

This course is designed to familiarize students with the various aspects of human development. Included are units pertaining to maleness and femaleness reproductive anatomies, hormonal influences, sexuality and communication, dysmenorrhea, P.M.S., pregnancy and birth, family planning, abortion, rape, incest, homosexuality, AIDS, STDs-VD, and responsible sexual expression. Open to all students. (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)

Formerly HUMAN 101. 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)

Formerly HUMAN 102. 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)

HUM 107 – Introduction to Cultural Studies (5 cr)

Formerly HUMAN 107. 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 (formerly ENG 101) or permission of instructor. SFCC recommended minimum reading placement score: COMPASS 80, ASSET 40. (SCC, SFCC)

HUM 141 – Introduction to Film (5 cr)

Formerly HUMAN 141. 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)

Formerly HUMAN 201. 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 205 – British Life and Culture (5 cr)

Formerly HUMAN 205. British life and culture is an interdisciplinary course designed to give students a broad overview of British culture and civilization. It takes a social, historical and cultural approach to contemporary British society. This course includes lectures given by adjunct British faculty, supporting seminars and related field trips to such places as the Museum of London, the Globe Theatre, the National Gallery and the House of Parliament. This course is offered only in England for SFCC students registered in the Washington Community College Consortium for Study Abroad in London Program. Note: Credit may not be earned for both HUM 205 (formerly HUMAN 205) and HIST 110. (SFCC)