Course Objectives/Course Outline
Spokane Community College

Course Title: Aircraft Digital Electronic Instrument Systems
Prefix and Course Number: AVIO& 201

Course Learning Outcomes:
By the end of this course, a student should be able to:

— Explain the fundamental principles of digital electronic systems
— Use computer math, number systems, logic expressions, and logic families
— State the functions of digital logic components
— Calculate logic expressions
— Demonstrate techniques for troubleshooting digital electronic systems
— Identify and describe aircraft data conversions methods and data bus systems

COURSE OUTLINE:

I.   Course Overview

II.   Personal Safety

III.   Aircraft digital monitoring, alerting, and fault systems

IV.   Number systems

V.   Logic expressions

VI.   Logic families

VII.   Integrated circuits

VIII.   Buffers and inverters

IX.   Digital and analog switches

X.   Registers and memory

XI.   Microprocessors

XII.   TDM and FDM Multiplexing

XIII.   Data communication systems

XIV.　Aircraft data bus systems