

INDUSTRIAL AND SYSTEMS ENGINEERING, BACHELOR OF SCIENCE (BS)/ADVANCED PILOTING (CCBC)

Recommended Four-Year Plan

Course	Title	Hours
First Year		
Fall		
AVIP 180	Instrument Flight Theory (taken at CCBC)	7
AVIP 190	Instrument Flight Rating (taken at CCBC)	2
MATH 125	Precalculus ((taken at CCBC))	4
ENGR 110	Introduction to Engineering	2
SUBJ 139	Foundations of Academic Discovery ¹	3
Hours		18
Spring		
AVIP 120	Foundations and Development of Aviation (taken at CCBC)	3
CIST 100	Introduction to Information Technology (taken at CCBC)	3
WRIT 101	English Composition (taken at CCBC)	3
MATH 230	Calculus II	4
PHYS 216	University Physics 1 with Lab	4
Hours		17
Second Year		
Fall		
AVIP 215	Commercial Flight Theory (taken at CCBC)	5
AVIP 220	Commercial Flight Certification I (taken at CCBC)	3
ENGL 104	Critical Reading ((taken at CCBC))	3
LITR 210	Concepts of Literature (taken at CCBC)	3
ENGR 130	Engineering Computing Tools	2
PHYS 217	University Physics 2 with Lab	4
Hours		20
Spring		
AVIP 202	Aircraft Engines Theory (taken at CCBC)	3
AVIP 204	Aircraft Systems Theory (taken at CCBC)	3
AVIP 225	Commercial Flight Certification II (taken at CCBC)	3
ENGR 210	Statics	3
ENGR 120	Engineering Design Tools	2
CHEM 107 & CHEM 111	General Chemistry I and General Chemistry I Lab	4
Hours		18
Third Year		
Fall		
AVIP 250	Multi-Engine Flight Rating (taken at CCBC)	1
AVIP 260	Human Factors Theory (taken at CCBC)	3
AVIP 270	Aerodynamics of Flight (taken at CCBC)	3
MATH 231	Calculus III	4

MATH 232	Linear Algebra	3
ENGR 340	Engineering Economics	3
Hours		17
Spring		
AVIP 275	Certified Flight Instructor Theory (taken at CCBC)	2
Select two of the following:		4
AVIP 280	Certified Flight Instructor - Airplane (taken at CCBC)	
AVIP 285	Certified Flight Instructor-Instruments (taken at CCBC)	
AVIP 288	Certified Flight Instructor-Multi-Engine (taken at CCBC)	
ENGR 220	Engineering Materials	3
ENGR 250	Circuit Analysis I	3
Creative & Aesthetic Inquiry (https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-program/)		3
Hours		15
Fourth Year		
Fall		
METR 140	Foundations in Meteorology (taken at CCBC)	4
COMM 201	Public Speaking (taken at CCBC)	3
ISE 311	Introduction to Operations Research	3
ISE 372	Manufacturing Systems Design and Analysis	3
ISE 373	Quality Engineering	3
Hours		16
Spring		
ISE 370	Design of Industrial Systems and Processes	3
ISE 420	Simulation of Industrial Systems	4
ISE 421	Supply Chain & Logistics Engineering	3
ISE 430	Production Planning & Control	3
ISE 440	Health Care Systems Engineering	3
ISE Elective		2
Hours		18
Fifth Year		
Fall		
ISE 402	Work Design	3
MECH 330	Introduction to Mechatronics	4
ISE 410	Engineering Project Management	3
ISE 442	Human Factors Engineering	3
ISE 487	Industrial and Systems Engineering Senior Project I	1
ISE Elective		3
Hours		17
Spring		
ISE 460	Engineering Risk Analysis	3
ISE 488	Senior Project II	3
ISE Elective		3
Humanities Inquiry (https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-program/)		3

STAT 350	Applied Statistics	3
ENGL 205	Introduction to Professional Writing	3
Hours		18
Total Hours**		174

***This document serves as a guide. Earning a degree requires at least 120 credits, though some majors require more. Before registering for courses, consult your academic adviser and review your curriculum guide. Be sure to review and confirm your plan with your adviser at least once each academic year.*

Major Code: 6182 - ADVP/CIM 586
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