

MECHANICAL ENGINEERING, BACHELOR OF SCIENCE (BS)/ PROFESSIONAL PILOT (CCBC)

Course	Title	Hours
First Year		
Fall		
AVIP 160	Private Pilot Flight Theory (taken at CCBC)	7
AVIP 170	Private Pilot Flight Certification (taken at CCBC)	3
MATH 160	Calculus I (taken at CCBC)	4
ENGR 110	Introduction to Engineering	2
SUBJ 139	Foundations of Academic Discovery	3
Hours		19
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 180	Instrument Flight Theory (taken at CCBC)	7
AVIP 190	Instrument Flight Rating (taken at CCBC)	2
ENGR 130	Engineering Computing Tools	2
LITR 210	Concepts of Literature (taken at CCBC)	3
PHYS 217	University Physics 2 with Lab	4
Hours		18
Spring		
AVIP 205	Aircraft Engines & Systems (taken at CCBC)	4
METR 140	Foundations in Meteorology (taken at CCBC)	4
ENGR 210	Statics	3
ENGR 120	Engineering Design Tools	2
ENGR 240	Dynamics	3
Hours		16
Third Year		
Fall		
AVIP 215	Commercial Flight Theory (taken at CCBC)	5
AVIP 220	Commercial Flight Certification I (taken at CCBC)	3
MATH 231	Calculus III	4
MATH 232	Linear Algebra	3
CHEM 107	General Chemistry I	3
Hours		18
Spring		
AVIP 225	Commercial Flight Certification II (taken at CCBC)	3

AVIP 260	Human Factors Theory (taken at CCBC)	3
AVIP 270	Aerodynamics of Flight (taken at CCBC)	3
ENGR 230	Mechanics of Materials	3
ENGR 231	Mechanics of Materials Lab	1
ENGR 250 & ENGR 251	Circuit Analysis I and Circuit Analysis Lab	4
CHEM 111	General Chemistry I Lab	1
Hours		18

Fourth Year

Fall		
AVIP 275	Certified Flight Instructor Theory (taken at CCBC)	2
AVIP 280	Certified Flight Instructor - Airplane (taken at CCBC)	1
ENGR 301	Fluid Mechanics	3
ENGR 320	Thermodynamics	3
MECH 310	Machines and Mechanisms	3
Creative & Aesthetic Inquiry (https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-program/)		3
Hours		15

Spring

MATH 301	Differential Equations I	3
MECH 340	Heat Transfer	4
MECH 410	Machine Design	4
ENGR 220	Engineering Materials	3
Humanities Inquiry (https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-program/)		3
Mechanical Engineering Elective		3
Hours		20

Fifth Year

Fall		
ENGR 340	Engineering Economics	3
MECH 330	Introduction to Mechatronics	4
MECH 320	Manufacturing Processes	3
MECH 411	Automatic Control Systems	3
MECH 460	Capstone Design I	3
Mechanical Engineering Elective		3
Hours		19

Spring

MECH 430	Mechatronics	3
STAT 350	Applied Statistics	3
ENGL 205	Introduction to Professional Writing	3
MECH 461	Capstone Design II	3
Mechanical Engineering Elective		3
Select one of the following:		
COMM 200	Civil Discourse: Theory & Practice	
PHIL 110	Ethics and Civil Discourse	
POLI 235	Civil Discourse and Democracy	
Hours		18

Total Hours** **178**