

# ELECTRICAL AND COMPUTER ENGINEERING, BACHELOR OF SCIENCE (BS)/ADVANCED PILOTING (CCBC)

Course	Title	Hours
<b>First Year</b>		
<b>Fall</b>		
AVIP 180	Instrument Flight Theory (taken at CCBC)	7
AVIP 190	Instrument Flight Rating (taken at CCBC)	2
MATH 125	Calculus I (taken at CCBC)	4
ENGR 110	Introduction to Engineering	2
SUBJ 139	Foundation of Academic Discovery	3
<b>Hours</b>		<b>18</b>
<b>Spring</b>		
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
<b>Hours</b>		<b>17</b>
<b>Second Year</b>		
<b>Fall</b>		
AVIP 215	Commercial Flight Theory (taken at CCBC)	5
AVIP 220	Commercial Flight Certification I (taken at CCBC)	3
LITR 210	Concepts of Literature (taken at CCBC)	3
ENGR 210	Statics	3
PHYS 217	University Physics 2 with Lab	4
<b>Hours</b>		<b>18</b>
<b>Spring</b>		
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 120	Engineering Design Tools	2
ENGR 250 & ENGR 251	Circuit Analysis I and Circuit Analysis Lab	4
<b>Hours</b>		<b>15</b>
<b>Third Year</b>		
<b>Fall</b>		
AVIP 250	Multi-Engine 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
CPSC 146	Programming Principles	3
<b>Hours</b>		<b>17</b>

<b>Spring</b>		
AVIP 275	Certified Flight Instructor Theory (taken at CCBC)	2
Select 2 of the following:		4
AVIP 280	Multi-Engine Rating (taken at CCBC)	
AVIP 285	Certified Flight Instructor (taken at CCBC)	
AVIP 288	Certified Flight Instructor - Multi-Engine (taken at CCBC)	
MATH 301	Differential Equations I	3
CPSC 246	Object-Oriented Programming	3
Creative & Aesthetic Inquiry ( <a href="https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-program/">https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-program/</a> )		3
<b>Hours</b>		<b>15</b>
<b>Fourth Year</b>		
<b>Fall</b>		
METR 140	Foundations in Meteorology (taken at CCBC)	4
COMM 201	Public Speaking (taken at CCBC)	3
ECSE 230	Instrumentation with Lab	3
ECSE 350	Signals and Systems	3
MECH 330	Introduction to Mechatronics	4
<b>Hours</b>		<b>17</b>
<b>Spring</b>		
ECSE 310	Circuit Analysis II	3
ECSE 320	Electrical Circuit Design	3
ECSE 340	Processor Design and Structure	3
ECSE 410	Energy Conversion	3
ENGL 205	Introduction to Professional Writing	3
STAT 350	Applied Statistics	3
<b>Hours</b>		<b>18</b>
<b>Fifth Year</b>		
<b>Fall</b>		
ENGR 340	Engineering Economics	3
ECSE 360	Engineering Electromagnetics	3
CPSC 423	Computer Networks	3
MECH 411	Automatic Control Systems	3
ECSE 460	Capstone Design I	3
ESCE Elective		3
<b>Hours</b>		<b>18</b>
<b>Spring</b>		
ECSE 461	Capstone Design II	3
ECSE Elective		3
Humanities Inquiry ( <a href="https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-program/">https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-program/</a> )		3
CHEM 107 & CHEM 111	General Chemistry I and General Chemistry I Lab	4
<b>Hours</b>		<b>13</b>
<b>Total Hours**</b>		<b>166</b>