

CYBERSECURITY, BACHELOR OF SCIENCE (BS) - CONCENTRATION IN SECURE SOFTWARE DEVELOPMENT/ADVANCED PILOTING (CCBC)

Curri Culum Guide

GPA Requirement

Overall GPA: 2.0 or higher

Summary*

Code	Title	Hours
Rock Studies 2 Requirements (taken at CCBC)		33
Rock Studies 2 Requirements (taken at SRU)		12
Advanced Piloting Requirements (taken at CCBC)		29
Major/Concentration Requirements (taken at SRU)		60

* All undergraduate degree programs require a minimum of 120 credits. Some courses meet multiple requirements, but are only counted once toward the 120 credit total required to graduate.

Rock Studies 2 Requirements

Code	Title	Hours
The Rock		
SUBJ 139	Foundations of Academic Discovery ¹	3
WRIT 101	English Composition (taken at CCBC)	3
LITR 210	Concepts of Literature (taken at CCBC)	3
COMM 201	Public Speaking (taken at CCBC)	3
Select one of the following:		4
MATH102	Precalculus (taken at CCBC)	
MATH 125	Calculus I (taken at CCBC)	
Subtotal		16

Integrated Inquiry

Creative and Aesthetic Inquiry

Select 3 Credits (https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-program/)		3
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Humanities Inquiry

Select 3 Credits (https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-program/)		3
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Social Science Inquiry (taken at CCBC)

AVIP 260	Human Factors Theory (taken at CCBC)	3
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Natural Sciences Inquiry

SCI 101	Science of Life	3
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Physical Sciences Inquiry (taken at CCBC)

METR 140	Foundations in Meteorology (taken at CCBC)	4
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Subtotal		16
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Additional Rock Studies Requirements (taken at CCBC)

Select the following 13 Credits		13
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AVIP 120	Foundations and Development of Aviation (taken at CCBC)
AVIP 180	Instrument Flight Theory (taken at CCBC)
AVIP 270	Aerodynamics of Flight (taken at CCBC)
Total Hours	45

¹ Course offered in multiple subjects; cannot take course in first major subject.

DIVERSITY, EQUITY, AND INCLUSION REQUIREMENT

Students must take and pass a course with the Diversity, Equity, and Inclusion (DEI) designation prior to graduation. Students can meet this requirement by taking any DEI - designated course in any program at any time during their undergraduate career.

Major Requirements/Concentration

- 30 major credits must be taken at SRU or PASSHE
- 30 major credits must be taken at the 300 level or above

Code	Title	Hours
<i>Required Core Coursework</i>		
CPSC 130	Introduction to Computing and Programming ¹	3
CPSC 146	Programming Principles ¹	3
CPSC 207	Shell Commands and Scripting ¹	3
CPSC 300	Challenges of Computer Technology ¹	3
CPSC 301	Practical Computer Security	3
CPSC 311	Discrete Computational Structures ¹	3
CPSC 323	Fundamentals of Database Systems ¹	3
CPSC 327	Administration and Security	3
CPSC 423	Computer Networks ¹	3
CYBR 101	Cybersecurity in the Era of Evolving Technology	3
Subtotal		30

Secure Software Development Required Courses

CPSC 246	Object-Oriented Programming	3
CPSC 374	Algorithms and Data Structures	3
CPSC 376	Programming Language and Theory	3
CPSC 488	Software Engineering	3
CYBR 301	Secure Programming	3
CYBR 353	Software Assurance	3
CYBR 401	Software Security Analysis	3
CYBR 471	Malware Analysis	3
Subtotal		24

Secure Software Development Electives

Select two courses in sequence from one of the following areas:		6
CPSC 236	Selected Computer Languages	
CPSC 333	Introduction to Computer Forensics	
CPSC 370	Computer Organization and Architecture	
CPSC 450	Internship	
CPSC 474	Advanced Architecture & Parallel Computing	
CPSC 478	Analysis of Algorithms	

CPSC 480	Topics in Computer Science: Machine Learning	
CSS 351	Fraud	
CSS 354	Risk Assessment and Fraud Prevention	
Subtotal		6
Total Hours		60

¹ Course counts for 50% of Major requirements and Major GPA

* Some courses may require pre-requisites. Please see course descriptions to determine if there are any pre-requisites for that specific course.

Code	Title	Hours
Advanced Piloting Required Coursework Completed at CCBC:		
AVIP 190	Instrument Flight Rating	2
AVIP 202	Aircraft Engines Theory	3
AVIP 204	Aircraft Systems Theory	3
AVIP 215	Commercial Flight Theory	5
AVIP 220	Commercial Flight Certification I	3
AVIP 225	Commercial Flight Certification II	3
AVIP 250	Multi-Engine Flight Rating	1
AVIP 275	Certified Flight Instructor Theory	2
CIST 100	Introduction to Information Technology	3
Select two of the following:		4
AVIP 280	Certified Flight Instructor - Airplane	
AVIP 285	Certified Flight Instructor - Instruments	
AVIP 288	Certified Flight Instructor - Multi-Engine	
Total Hours		29

Important Curriculum Guide Notes

This Curriculum Guide is provided to help SRU students and prospective students better understand their intended major curriculum. Enrolled SRU students should note that the My Rock Audit may place already-earned and/or in progress courses in different, yet valid, curriculum categories. Enrolled SRU students should use the My Rock Audit Report and materials and information provided by their faculty advisers to ensure accurate progress towards degree completion. *The information on this guide is current as of the date listed. Students are responsible for curriculum requirements at the time of enrollment at the University.*

PASSHE - Pennsylvania State System of Higher Education Institutions

CYBERSECURITY - SECURE SOFTWARE DEVELOPMENT
CONCENTRATION - BS (6421/SSDE)

ADVANCED PILOTING WITH CCBC (ADVP) /CIM 582

This program is effective as of Spring 2026

Revised 01.05.2026

MOU date: 09.18.2025