

CYBERSECURITY, BACHELOR OF SCIENCE (BS) - CONCENTRATION IN SECURE SOFTWARE DEVELOPMENT

Recommended Four-Year Plan

Course	Title	Hours
First Year		
Fall		
CPSC 130	Introduction to Computing and Programming	3
CYBR 101	Cybersecurity in the Era of Evolving Technology	3
ENGL 102	Critical Writing	3
ESAP 101	FIRST Seminar *	1
MATH 120 or SCI 101	Intermediate Algebra or Science of Life	3
SUBJ 139	Foundations of Academic Discovery ¹	3
Hours		16
Spring		
CPSC 146	Programming Principles	3
CPSC 301	Practical Computer Security	3
ENGL 104	Critical Reading	3
Select one of the following:		4
MATH 125	Precalculus	
MATH 225	Calculus I	
MATH 230	Calculus II	
MATH 231	Calculus III	
Select one of the following:		3
COMM 200	Civil Discourse: Theory & Practice	
PHIL 110	Ethics and Civil Discourse	
POLS 235	Civil Discourse and Democracy	
Hours		16
Second Year		
Fall		
CPSC 207	Shell Commands and Scripting	3
CPSC 246	Advanced Programming Principles	3
SCI 101	Science of Life (or CE Elective)	3
Creative & Aesthetic Inquiry (https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-program/)		3
Social Science Inquiry (https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-program/)		3
Declare a Thematic Thread ²		
Hours		15
Spring		
CPSC 323	Fundamentals of Database Systems	3
CYBR 301	Secure Programming	3
CPSC 300	Challenges of Computer Technology	3
SCI 102	Understanding the Physical World (or Cybersecurity Elective)	3

Humanities Inquiry (https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-program/)		3
Hours		15
Third Year		
Fall		
CPSC 311	Discrete Computational Structures	3
CPSC 376	Programming Language and Theory	3
CYBR 353	Software Assurance	3
Thematic Thread Requirement (https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-program/)		3
Cyber Elective or Free Elective (p. 1)		3
Hours		15
Spring		
CPSC 327	Administration and Security	3
CPSC 374	Algorithms and Data Structures	3
CYBR 401	Software Security Analysis	3
Thematic Thread Requirement (https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-program/)		3
Cyber Elective or Free Elective (p. 1)		3
Hours		15
Fourth Year		
Fall		
CPSC 423	Computer Networks	3
CYBR 471	Malware Analysis	3
Thematic Thread Requirement (https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-program/)		3
Cyber Elective or Free Elective (p. 1)		3
Cyber Elective or Free Elective (p. 1)		3
Hours		15
Spring		
CPSC 488	Software Engineering	3
Thematic Thread Requirement (https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-program/)		3
Cyber Elective or Free Elective (p. 1)		3
Cyber Elective or Free Elective (p. 1)		4
Hours		13
Total Hours**		120

¹ Course offered in multiple subjects; cannot take course in first major subject
² Work with your Academic Adviser to declare a Thematic Thread by the end of your fall semester in your second year.
 * Students are encouraged to take ESAP 101 as a Free Elective.

Cyber Elective - CE Courses

Code	Title	Hours
Select six credits		
CPSC 333	Introduction to Computer Forensics	3
CPSC 370	Computer Organization and Architecture	3
CPSC 474	Advanced Architecture & Parallel Computing	3
CPSC 450	Internship ¹	1-12
CPSC 478	Analysis of Algorithms	3

¹ Jr. or Sr. Computing major with 3.0 GPA. Application required

*** This document is meant to serve as a guide. Some planners may show more than 120 credits because faculty have created flexibility in choosing courses. However, only 120 credits are required to obtain a degree. Please consult with your academic adviser and refer to your curriculum guide prior to registering for courses. This plan should be reviewed, and verified, by you and your academic adviser at least once each academic year.*

Major Code: 6421

Concentration: SSDE

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