

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

## Recommended Four-Year Plan

Course	Title	Hours
<b>First Year</b>		
<b>Fall</b>		
CPSC 130	Introduction to Computing and Programming	3
CYBR 101	Cybersecurity in the Era of Evolving Technology	3
ENGL 102	Critical Writing	3
MATH 120 or SCI 101	Intermediate Algebra or Science of Life	3
INDS 101	FIRST Seminar	1
SUBJ 139	University Seminar <sup>1</sup>	3
<b>Hours</b>		<b>16</b>
<b>Spring</b>		
CPSC 146	Programming Principles	3
CPSC 301	Practical Computer Security	3
ENGL 104	Critical Reading	3
MATH 125	Precalculus	4
Select one of the following:		3
COMM 200	Civil Discourse: Theory & Practice	
PHIL 110	Ethics and Civil Discourse	
POLS 235	Civil Discourse and Democracy	
<b>Hours</b>		<b>16</b>
<b>Second Year</b>		
<b>Fall</b>		
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 ( <a href="https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-quick-guide/">https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-quick-guide/</a> )		3
Social Science Inquiry ( <a href="https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-quick-guide/">https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-quick-guide/</a> )		3
Declare a Thematic Thread <sup>2</sup>		
<b>Hours</b>		<b>15</b>
<b>Spring</b>		
CPSC 323	Fundamentals of Database Systems	3
CYBR 301	Secure Programming	3
CPSC 300	Challenges of Computer Technology	3
Humanities Inquiry ( <a href="https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-quick-guide/">https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-quick-guide/</a> )		3
SCI 102	Understanding the Physical World (or Cybersecurity Elective)	3
<b>Hours</b>		<b>15</b>

## Third Year

### Fall

CPSC 311	Discrete Computational Structures	3
CYBR 353	Software Assurance	3
CPSC 376	Programming Language and Theory	3
Thematic Thread Requirement ( <a href="https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-quick-guide/">https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-quick-guide/</a> )		3
Cyber Elective or Free Elective (p. 1)		3
<b>Hours</b>		<b>15</b>

### Spring

CPSC 327	Administration and Security	3
CPSC 374	Algorithms and Data Structures	3
Thematic Thread Requirement ( <a href="https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-quick-guide/">https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-quick-guide/</a> )		3
Cyber Elective or Free Elective (p. 1)		3
Cyber Elective or Free Elective (p. 1)		3
<b>Hours</b>		<b>15</b>

## Fourth Year

### Fall

CPSC 423	Computer Networks	3
CYBR 401	Software Security Analysis	3
Thematic Thread Requirement ( <a href="https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-quick-guide/">https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-quick-guide/</a> )		3
Cyber Elective or Free Elective (p. 1)		3
Cyber Elective or Free Elective (p. 1)		3
<b>Hours</b>		<b>15</b>

### Spring

CPSC 488	Software Engineering	3
CYBR 471	Malware Analysis	3
Thematic Thread Requirement ( <a href="https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-quick-guide/">https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-quick-guide/</a> )		3
Cyber Elective or Free Elective (p. 1)		3
Cyber Elective or Free Elective (p. 1)		3
<b>Hours</b>		<b>15</b>
<b>Total Hours**</b>		<b>122</b>

<sup>1</sup> Course offered in multiple subjects; cannot take course in first major subject

<sup>2</sup> Work with your Academic Adviser to declare a Thematic Thread by the end of your fall semester in your second year. Click here (<https://forms.office.com/Pages/ResponsePage.aspx?id=ul1VhjsH90-30bc6d8W9kIM7Wtmwv-VJnD6riXkdMh1UNEFHMUNHOE15TkJOWIRHVzRCMzI3UIdNTI4u>) to declare a thread.

\* Students are encouraged to take INDS 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 <sup>1</sup>	1-12
CPSC 478	Analysis of Algorithms	3

<sup>1</sup> 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  
Revised date: 09.13.2021