

# Bachelor of Science in Cybersecurity

## Concentration in Secure Software Development

**ROCK STUDIES REQUIREMENTS (39 41 credits)**

Course	Title	Cr
<b>THE ROCK (12-13 credits)</b>		
<b>EXEMPT</b>	Foundations of Academic Discovery	0
ENGL 102	Critical Writing	3
ENGL 104	Critical Reading	3
✓ COMM 200	Civil Discourse <b>COMM201</b>	3
✓ MATH 125 or MATH 225	Pre-Calculus Calculus I <b>Math Elective: SRU requires MATH 102 or 221</b>	3-4
<b>INTEGRATED INQUIRY (15-16 credits)</b>		
Creative and Aesthetic Inquiry (3 credits)		
		3
Humanities Inquiry (3 credits)		
		3
Social Science Inquiry (3 credits)		
		3
Natural Science Inquiry (3-4 credits)		
✓	<b>Natural Science Elective with Lab</b>	3-4
Physical Science Inquiry (3 credits)		
SCI 102	Understanding the Physical World	3
<b>THEMATIC THREAD – Additional Transfer Credits (12 credits)</b>		
✓	<b>ENGL 101-College Writing</b>	3
✓	<b>BUSN 123-Principles of Management</b>	3
✓	<b>ECON 101 or 102 or BUSN 244</b>	3
✓	<b>HLTH 120-Health Science</b> <b>SRU prefers this instead of PHED 125</b>	3

**COMPUTER COMPETENCY (3 credits)**

Students must demonstrate computer competency by:

CPSC ____	Complete one of the following courses: CPSC 100, 110, 130, or PE202 at SRU or another post-secondary institution	3
✓ <b>COMP 242</b>		

**OTHER BASIC REQUIREMENTS**

(Check with your advisor or a current degree audit report to see if you have been exempted from this course.) The credit earned in this course will not be counted toward the 120 credit hour minimum needed to earn a degree.

<b>EXEMPT</b>	Beginning Algebra	
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★	Course may have a prerequisite. See Undergraduate Online Catalog.
^	Course counts for 50% of Major requirements and Major GPA
PASSHE = Pennsylvania State System of Higher Education Institution	

**Co-curricular and Experiential Learning**

Students are encouraged to explore additional curricular and co-curricular opportunities. There is a strong correlation between long-term student success and participation in the following types of programs and activities:

1.	High-Impact Practice (HIP) designated classes, (Learning Community, Cap-Stone Course, Semester Projects)
2.	Student-faculty research
3.	Service Learning Courses
4.	Internships
5.	Volunteering (Summer Day Camps, Semester Workshops for K-12 students, Robot demos for visitors/local school districts)
6.	Industry Awareness Night

**MAJOR REQUIREMENTS (60 credits)**

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

Course	Title	Cr
<b>Required Courses (30 credits)</b>		
CPSC 130^	Intro to Computing and Programming★	3
✓ CPSC 146^	Programming Principles★ <b>COMP237</b>	3
✓ CPSC 207^	Shell Commands and Scripting★ <b>COMP246</b>	3
CPSC 300^	Challenges of Computer Tech★	3
✓ CPSC 301^	Practical Computer Security★ <b>COMP277</b>	3
CPSC 311^	Discrete Computational Structures★	3
✓ CPSC 323^	Fundamentals of Database Sys.★ <b>COMP229</b>	3
✓ CPSC 327^	Administration and Security★ <b>COMP214</b>	3
✓ CPSC 423^	Computer Networks ★ <b>COMP278</b>	3
CYBR 101^	Cybersecurity in the Era of Evolving Tech.	3
<b>Secure Software Development Required Courses (24 credits)</b>		
CPSC 246^	Advanced Programming Principles★	3
CPSC 374^	Algorithms and Data Structures★	3
CPSC 376^	Program Lang & 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
<b>Secure Software Development Electives (6 credits) – Choose two</b>		
CPSC 333^	Computer Forensics★	3
CPSC 370^	Computer Org and Arch★	3
CPSC 450^	Internship★	3
CPSC 474^	Advanced Architecture & Parallel Computing★	3
CPSC 478^	Analysis of Algorithms★	3

**FREE ELECTIVES (16 18 credits)**

✓ CPSC 102	<b>COMP 101-Computer Information Systems</b>	3
✓ MIS 353	<b>COMP 211-Networking I</b>	3
✓ CPSC elective	<b>COMP 215-PC Management Techniques I</b>	4
✓ CPSC elective	<b>COMP 244-Microcomputer Oper. Systems</b>	3
✓ MIS 413	<b>COMP 247-Systems Analysis &amp; Design</b>	3
✓ CPSC elective	<b>COMP 228 or COOP 101</b>	4
✓ CPSC elective	<b>COMP 279-Cybersecurity II</b>	3

**GPA REQUIREMENT**  
2.0 or higher Major GPA  
2.0 or higher Overall GPA

**BC3 SRU COMP INFO SYS NETWORKING & SECURITY (A.A.S.) to CYBERSECURITY SECURE SOFTWARE DEVELOPMENT (B.S.)**

Curriculum Category	Transfer Credits	SRU Credits
Rock Studies	21-23	18
Computer Competency	3	0
Major Requirements	18	42
Free Electives	23	0
<b>TOTAL CREDITS</b>	<b>65-67</b>	<b>60</b>