Slippery Rock University of Pennsylvania Curriculum Guide Bachelor of Science in Computing Concentration in Computing Analytics

ROCK STUDIES REQUIREMENTS (38 40 credits)		
Course	urse Title	
THE ROCK (12 credits)		
EXEMPT	Foundations of Academic Discovery	
ENGL 102	Critical Writing 3	
ENGL 104	Critical Reading	3
COMM 200	Civil Discourse COMM201	
MATH 125 or	Pre-Calculus	4
MATH 225 or	Calculus I	4
MATH 230 or	Calculus II	4
MATH 231 or	Calculus III	4
🖌 STAT 152	Elementary Statistics I	3 ◊
	Math Elective: SRU recommends MATH 107	
INTEGRATED I	NQUIRY (15 credits)	
Creative and Ae	sthetic Inquiry (3 credits)	
		3
Humanities Inqu	iry (3 credits)	
×	✓ Economics Elective 3	
Social Science I	nquiry (2-3 credits)	
✓ PHED 125 or HLTH 120		2-3
Natural Science Inquiry (3-4 credits)		
√	Natural Science Elective with Lab	3-4
Physical Science	e Inquiry (3 credits)	
SCI 102	Understanding the Physical World	3
THEMATIC THE	READ (12 credits)	
Full list of Thematic Threads and their course requirements available here.		
Choose 12 credits (from at least 3 Categories; no more than 6 credits from		
one department; 6 credits must be 300-level or above)		

COMPUTER COMPETENCY (3 credits) Students must demonstrate computer competency by:		
Passed Exam	Pass Computer Competency Exam at SRU	
OR		
CPSC	Complete one of the following courses: CPSC 100, 110, 130, or PE202 at SRU or another post-secondary	3
✓ COMP 101	institution	

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. EXEMPT Beginning Algebra

*	Course may have a prerequisite. See Undergraduate Online Catalog.	
\$	Course can be counted as a Rock Studies Requirement, but earns credit only once toward your 120-credit total.	
^	 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/C	ONCENTRATION REQUIREMENTS (51 credits)		
27 major credits must be taken at SRU or PASSHE			
27 major credits must be taken at the 300 level or above			
Course	Title	Cr	
Required Core Courses (24 credits)			
CPSC 130^	Intro to Computing & Programming * COMP235	3	
CPSC 146^	Programming Principles * COMP237	3	
 CPSC 207^ 	Shell Commands and Scripting COMP246	3	
	Challenges of Computer Tech*		
• 01 00 300	Computer Elective: SRU recommends COMP 208	5	
CPSC 311^	Discrete Computational Structures *	3	
 CPSC 323^ 	Database Systems * COMP229	3	
CPSC 327^	Administration and Security *	3	
CPSC 423^	CPSC 423 [^] Computer Networks *		
✓ STAT 152∆	Elementary Statistics I 🗙	^	
V OTAT 152	Math Elective: SRU recommends MATH 107	~	
Computing Ana	lytics Core Courses (21 credits)		
CPSC 246^	Adv Programming Principles *	3	
CPSC 370	Computer Org and Arch ★	3	
CPSC 374^	Algorithms & Data Structures * COMP233	3	
CPSC 405^	405^ Data Mining & Analysis *		
CPSC 474	Adv Architecture & Parallel Computing * 3		
CPSC 480^	CPSC 480 [^] Machine Learning *		
CPSC 485^	CPSC 485 [^] Big Data Analytics ★		
Computer Scier	ce Electives – Choose two (6 credits)		
MATH 225	MATH 225 Calculus I*		
CPSC 406^	Data Visualization *		
CPSC 450^	^ Internship★		
CPSC 456^	456 [^] Intro Computer Graphics *		
CPSC 476^	CPSC 476 [^] Artificial Intelligence Robotics ★		
CPSC 478^ Analysis of Algorithms *		3	

FREE ELECTIVES (26 28 credits)		
MIS 210	COMP 210-Productivity Applications 3	
MGMT 1TR	BUSN 203-Intro to Business 3	
CPSC 2TR	COMP 231-Visual Programming 3	
 CPSC 236 	COMP 238-Object-Oriented Programming	3
ENGL 101	ENGL 101-College Writing	3
🖌 MIS 413	COMP 247-Systems Analysis & Design	3
 CPSC 2TR 	COMP 253-Client-Side Web Programming	3
TRNS 1TR	GENL 111-Job Readiness	1
 CPSC 317 	COMP 254-Server-Side Web Programming	3

BC3 SRU Computer Information Systems Programming Specialist, A.A.S. to Computing Computing Analytics, B.S.			
Curriculum Category	Credits Completed	Credits Needed	
Rock Studies	14-16	24	
Computer Competency	3	0	
Major Requirements	18	33	
Free Electives	25	1-3	
TOTAL CREDITS	60-62	<mark>58-60</mark>	
Students need a minimum of 120 credits to graduate from SRU. If the			

BC3 student transfers in with 60 credits, 60 credits are required at SRU. If the student transfers in with 62 credits, 58 credits are required at SRU.

> COMPUTING - BS (6420) Concentration in Computing Analytics (COAN) Effective Summer 2022 Revised 06/2022