COMPUTING, BACHELOR OF SCIENCE (BS) - CONCENTRATION IN COMPUTING ANALYTICS

Recommended Four-Year Plan

Course	Title	Hours
First Year		
Fall		
CPSC 130	Introduction to Computing and Programming	3
ENGL 102	Critical Writing	3
ESAP 101	FYRST Seminar [*]	1
MATH 120 or SCI 101	Intermediate Algebra or Science of Life	3
SUBJ 139	Foundations of Academic Discovery [1]	3
Creative & Aesthetic Inquiry (https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-program/)		3
	Hours	**16**
Spring		
CPSC 146	Programming Principles	3
Select one of the following:		3-4
MATH 125	Precalculus	
MATH 225	Calculus I	
MATH 230	Calculus II	
MATH 231	Calculus III	
STAT 152	Elementary Statistics I	
ENGL 104	Critical Reading	3
Select one of the following:		3
COMM 200	Civil Discourse: Theory & Practice	
PHIL 110	Ethics and Civil Discourse	
POLS 235	Civil Discourse and Democracy	
Social Science Inquiry (https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-program/)		3
	Hours	**15-16**
Second Year		
Fall		
CPSC 207	Shell Commands and Scripting	3
CPSC 246	Advanced Programming Principles	3
STAT 152	Elementary Statistics I	3
SCI 101	Science of Life (or CA Elective)	3
Computer Analytics Electives or Free Electives (p. 1)		3
Declare a Thematic Thread [2]		
	Hours	**15**
Spring		
CPSC 323	Fundamentals of Database Systems	3
CPSC 370	Computer Organization and Architecture	3
SCI 102	Understanding the Physical World	3
Humanities Inquiry (https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-program/)		3
Computer Analytics Electives or Free Electives (p. 1)		3
	Hours	**15**
Third Year		
Fall		
CPSC 311	Discrete Computational Structures	3
CPSC 300	Challenges of Computer Technology	3
CPSC 405	Data Mining and Data Analysis	3
Thematic Thread Requirement (https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-program/)		3
Computer Analytics Electives or Free Electives (p. 1)		3
	Hours	**15**
Spring		
CPSC 327	Administration and Security	3
CPSC 374	Algorithms and Data Structures	3
hematic Thread Requirement (https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-program/)		3
Computer Analytics Electives or Free Electives (p. 1)		3
Computer Analytics Electives or Free Electives (p. 1)		3
	Hours	**15**
Fourth Year		
Fall		
CPSC 423	Computer Networks	3
CPSC 474	Advanced Architecture & Parallel Computing	3
CPSC 480	Topics in Computer Science: Machine Learning	3
Thematic Thread Requirement (https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-program/)		3
Computer Analytics Elective or Free Elective		3
	Hours	**15**
Spring		
CPSC 485	Big Data Analytics	3
Thematic Thread Requirement (https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-program/)		3
Computer Analytics Electives or Free Electives (p. 1)		4
Computer Analytics Electives or Free Electives (p. 1)		3
	Hours	**13**
	Total Hours**	**119-120**

[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.

Computer Analytics Elective Courses

Code	Title	Hours
Select six credits of the following:		6
CPSC 406	Data Visualization	
CPSC 450	Internship [1]	
CPSC 456	Introduction to Computer Graphics	
CPSC 476	Artificial Intelligence	

CPSC 478	Analysis of Algorithms
MATH 225	Calculus I

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

[2] Work with your Academic Adviser to declare a Thematic Thread by the end of your fall semester in your second year.

*** 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: 6420
Concentration Code: COAN
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