CIVIL ENGINEERING, BACHELOR OF SCIENCE (BS)

Curriculum Guide

GPA Requirement

Major GPA: 2.00 or higher
Overall GPA: 2.00 or higher

Summary*

Code	Title	Hours
Rock Studies 2 Requirements		41
Other Basic Requirements		0-3
Computer Competency		0-3
Major/Concentration Requirements		84
Natural Science and Math College-Wide Requirements		12
Elective		3

* All undergraduate degree programs require a minimum of 120 credits. Some courses meet multiple requirements, but are only counted once toward the 120 credit total required to graduate.

Rock Studies 2 Requirements

Code	Title	Hours
The Rock		
SUBJ 139	Foundations of Academic Discovery [1]	3
ENGL 102	Critical Writing	3
ENGL 104	Critical Reading	3
MATH 225	Calculus I	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	
Subtotal		16
Integrated Inquiry		
Creative and Aesthetic Inquiry		
Select 3 Credits (https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-program/)		3
Humanities Inquiry		
Select 3 Credits (https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-program/)		3
Social Science Inquiry		
Select 3 Credits (https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-program/)		3
Natural Sciences Inquiry		
CHEM 107	General Chemistry I	3
CHEM 111	General Chemistry I Lab	1
Physical Sciences Inquiry		
PHYS 216	University Physics 1 with Lab	4
Subtotal		17
Additional Rock Studies Requirements		
Required Thematic Thread Coursework:		
MATH 230	Calculus II	4

Code	Title	Hours
PHYS 217	University Physics 2 with Lab	4
Subtotal		8
Total Hours		**41**

[1] Course offered in multiple subjects; cannot take course in first major subject.

Basic Math Requirement

Check with your adviser 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.

Code	Title	Hours
Complete one of the following:		0-3
Meet required minimum SAT or ACT math score OR		
ESAP 110	Beginning Algebra	
Total Hours		**0-3**

Computer Competency

Code	Title	Hours
Demonstrate "computer competency" by one of the following:		0-3
Pass Computer Competency Exam OR		
Select one of the following at SRU or another post-secondary institution:		
CPSC 100	Introduction to Computing for Liberal Arts	
CPSC 110	Computer Concepts	
CPSC 130	Introduction to Computing and Programming	
PE 202	Technology for Wellness	
Total Hours		**0-3**

DIVERSITY, EQUITY, AND INCLUSION REQUIREMENT

Students must take and pass a course with the Diversity, Equity, and Inclusion (DEI) designation prior to graduation. Students can meet this requirement by taking any DEI - designated course in any program at any time during their undergraduate career.

Major/Concentration Requirements

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

Code	Title	Hours
Required Engineering Courses		
ENGR 110	Introduction to Engineering [1]	2
ENGR 120	Engineering Design Tools [1]	2
ENGR 130	Engineering Computing Tools [1]	2
ENGR 210	Statics [1]	3
ENGR 220	Engineering Materials [1]	3
ENGR 230	Mechanics of Materials	3
ENGR 231	Mechanics of Materials Lab	1
ENGR 301	Fluid Mechanics [1]	3
ENGR 340	Engineering Economics [1]	3
CIVL 210	Elementary Survey [1]	3
CIVL 310	Structural Engineering [1]	4
CIVL 320	Transportation Engineering [1]	3

CIVL 330	Environmental Engineering [1]	4
CIVL 340	Geotechnical Engineering [1]	3
CIVL 350	Water Resources Engineering [1]	3
CIVL 410	Structural Steel Design [1]	3
CIVL 411	Reinforced Concrete Design	3
CIVL 420	Traffic Engineering [1]	3
CIVL 430	Storm Water Management [1]	3
CIVL 440	Construction Management	3
CIVL 460	Capstone Design I [1]	3
CIVL 461	Capstone Design II	3
Subtotal		63
Engineering Elective		
Select one of the following:		*3*
ENGR 240	Dynamics	
ENGR 310	Introduction to Electrical Engineering	
ENGR 320	Thermodynamics	
Civil Engineering Electives - 400 Level		
Select two of the following:		*6*
CIVL 412	Finite Element Analysis	
CIVL 421	Highway Engineering	
CIVL 422	Transportation Terminal Design	
CIVL 431	Environmental Engineering Design	
CIVL 432	Groundwater Hydrology	
CIVL 441	Sustainable Development	
Required Math and Science Courses		
BIOL 105	Environmental Biology	3
MATH 232	Linear Algebra	3
MATH 301	Differential Equations I	3
STAT 350	Applied Statistics	3
Subtotal		21
Total Hours		**84**

[1] Course counts for 50% of Major requirements and Major GPA

* Some courses may require pre-requisites. Please see course descriptions to determine if there are any pre-requisites for that specific course.

FREE ELECTIVE

Code	Title	Hours
Select three credits		3
Total Hours		**3**

Natural Science and Math College-Wide Requirements

Code	Title	Hours
CHEM 107	General Chemistry I [1]	3
CHEM 111	General Chemistry I Lab [1]	1
MATH 225	Calculus I [1]	4
PHYS 216	University Physics 1 with Lab	4
Total Hours		**12**

[1] Course can be counted as a Rock Studies 2 Requirement, but earns credit only once toward your 120-credits total.

Important Curriculum Guide Notes

This Curriculum Guide is provided to help SRU students and prospective students better understand their intended major curriculum. Enrolled SRU students should note that the My Rock Audit may place already-earned and/or in progress courses in different, yet valid, curriculum categories. Enrolled SRU students should use the My Rock Audit Report and materials and information provided by their faculty advisers to ensure accurate progress towards degree completion. *The information on this guide is current as of the date listed. Students are responsible for curriculum requirements at the time of enrollment at the University.*

PASSHE - Pennsylvania State System of Higher Education Institutions

CIVIL ENGINEERING - BS (6183)
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