

Slippery Rock University of Pennsylvania – Curriculum Guide

Bachelor of Science in Physics – Computational Physics Track

LIBERAL STUDIES REQUIREMENTS (48-49 credits)

See Liberal Studies Guide for Goal and Enrichment choices

GOAL COURSE REQUIREMENTS

Complete Goal requirements as indicated below (39-40 credits)

✓ **Course** **Title** **Cr** **Gr**

Basic Requirements - ENGL101&103 required if student entered SRU prior to Fall 2011. ENGL102 required if student entered SRU Fall 2011 forward.

ENGL 101 <u>and</u>	College Writing I	<u>and</u>	3	
ENGL 103 <u>or</u>	College Writing II	<u>or</u>	3	
ENGL 102	College Writing		3	
COMM 200	Public Speaking ★		3	
ENGL 210	Interpreting Literature ★		3	

The Arts

Goal 3

Global Community (see Liberal Studies Guide for details)

Goal – Non-US 3

Goal – Non – US 3

Goal – US 3

Human Institutions/Interpersonal Relationships

Goal 3

Science, Technology & Math

CHEM 107 General Chemistry I ★◇ 3

CHEM 111 General Chemistry I Lab ★◇ 1

Goal – Sci ◇ 3

MATH 225 Calculus I ★◇ 4

Challenges of the Modern Age

Goal 3

ENRICHMENT COURSE REQUIREMENTS

Choose one course from three of the following Enrichment areas. (9 credits)

The Arts

Global Community

Human Institutions/Interpersonal Relationships

Science, Technology & Math

MATH 230 Calculus II ★◇ 4

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.

ACSD 110 Beginning Algebra 3

COMPUTER COMPETENCY (for students entering Fall 2008 and after)

Students must demonstrate "computer competency" by:

Passed Exam Pass Computer Competency Exam at SRU Orientation

OR CPSC _____ **Complete one of the following courses: CPSC 100, 110, 130 or 210 at SRU or another post-secondary institution** 1-3

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 advisors to ensure accurate progress towards degree completion. *The information on this guide is current as of the date below. Students are responsible for curriculum requirements at the time of enrollment at the University.*

★ Indicates this course may have a prerequisite. Please refer to the Undergraduate Online Catalog.

◇ Indicates this course may count as a Major Requirement and a Liberal Studies Requirement, **but you will only receive credit once towards your 120 credit total.**

Student's Name: _____ Date: _____

Advisor's Name: _____

MAJOR REQUIREMENTS (59 credits)

✓ **Course** **Title** **Cr** **Gr**

Required Physics Courses (27 credits)

PHYS 212	General Physics II / Lab ★	4	
PHYS 213	General Physics III / Lab ★	3	
PHYS 315	Engineering Mechanics II: Dynamics★	3	
PHYS 331	Mathematical Methods of Physics ★	3	
PHYS 381	Advanced Physics Lab ★	2	
PHYS 385	Computational Physics I ★	3	
PHYS 411	Modern Physics ★	4	
PHYS 480	Quantum ★	3	
PHYS 490	Independent Study: Computational Physics Research	1-3	

Required Physics Electives (6 credits)

Note: Students are encouraged to take PHYS 410

PHYS 301 or CHEM 301	Physical Chemistry I ★	3	
PHYS 314	Engineering Mechanics I ★	3	
PHYS 325	Analog & Digital Electronics ★	3	
PHYS 371	Physical Optics ★	3	
PHYS 410	Electricity and Magnetism ★	3	

Related Field Work (

CPSC 140	Intro to Programming Principles ★	3	
CPSC 150	Advanced Programming: C++ ★	4	
CPSC 374	Algorithms and Data Structures ★	3	
MATH 230	Calculus II ★	4	
MATH 231	Calculus III ★	4	
MATH 240	Linear Algebra and Differential Equations ★	3	
MATH 301	Differential Equations I ★	3	
MATH 315	Numerical Mathematics ★	3	

NATURAL SCIENCE AND MATH COLLEGE-WIDE REQUIREMENTS

Students must take the following four courses (12 credits)

CHEM 107	General Chemistry I ★◇	3	
CHEM 111	General Chemistry I Lab ★◇	1	
MATH 225	Calculus I ★◇	4	
PHYS 211	General Physics I/Lab ★◇	4	

ELECTIVES (1 credit)

QPA REQUIREMENT
2.00 or higher Major QPA
2.00 or higher Overall QPA



PHYSICS – BS
 COMPUTATIONAL PHYSICS TRACK
 Enrollment Services
 Revised 9-2011