

# Slippery Rock University of Pennsylvania – Curriculum Guide

## Bachelor of Science in Biology – Professional LECOM Dental (4+4)

LIBERAL STUDIES REQUIREMENTS (45-46 credits)				
See Liberal Studies Guide for Goal and Enrichment choices				
GOAL COURSE REQUIREMENTS				
Complete Goal requirements as indicated below (36-37 credits)				
✓	Course	Title	Cr	Gr
<b>Basic Requirements (9 credits)</b>				
	ENGL 102	Critical Writing	3	
	ENGL 104 or ENGL 220	Critical Reading ★ or Intro to Literary and Cultural Studies ★	3	
	COMM 200	Civil Discourse	3	
<b>The Arts (3 credits)</b>				
	Goal		3	
<b>Global Community (9 credits)</b>				
	Goal – Non-US		3	
	Goal – Non-US		3	
	Goal – US		3	
<b>Human Institutions/Interpersonal Relationships (3 credits)</b>				
	Goal		3	
<b>Science, Technology &amp; Math (9-10 credits)</b>				
	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	
<b>Challenges of the Modern Age (3 credits)</b>				
	Goal		3	
ENRICHMENT COURSE REQUIREMENTS				
Choose one course from three of the following Enrichment areas. (9 credits)				
<b>The Arts</b>				
<b>Global Community</b>				
<b>Human Institutions/Interpersonal Relationships</b>				
<b>Science, Technology &amp; Math</b>				
	CHEM108~	General Chemistry II★◇	3	

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				
Students must demonstrate "computer competency" by:				
	Passed Exam	Pass Computer Competency Exam		
OR	CPSC _____	<b>Complete one of the following courses:</b> CPSC 100, 110, or PE 202 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 My Rock Audit may place already-earned and/or in progress courses in different, yet valid, curriculum categories. Enrolled SRU students should use My Rock Audit 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.*

★	Course may have a prerequisite. See Undergraduate Online Catalog.
◇	Course can be counted as a Liberal Studies Requirement, but earns credit only once toward your 120-credits total.
~	Course counts for 50% of Major requirements but not for Major GPA
^	Course counts for 50% of Major requirements and Major GPA
●	Core GPA
PLE	Pymatuning Laboratory of Ecology
PASSHE = Pennsylvania State System of Higher Education Institution	

MAJOR REQUIREMENTS (59-60 credits)				
• 30 major credits must be taken at SRU or PASSHE				
• 30 major credits must be taken at the 300 level or higher				
✓	Course	Title	Cr	Gr
<b>Biology Core Requirements (16 credits)</b>				
	BIOL 104^●	Principles of Biology/Lab	4	
	BIOL 201^●	General Botany / Lab★	4	
	BIOL 212^●	General Zoology / Lab★	4	
	BIOL 250^●	Genetics / Lab★	4	
<b>Required Upper-Level Biology (1 credit)</b>				
	BIOL 492^	Seminar	1	
<b>Upper-Level Biology Electives (15 credits)</b>				
	BIOL 325^	Biometry/Lab	3	
	BIOL 330^	Microbiology/Lab ★	3	
	BIOL 335^	Cell Biology/Lab *	3	
	BIOL 340^	Vertebrate Anatomy/Lab ★	3	
	BIOL 370^	Molecular Biology/Lab ★	3	
	BIOL 401^	Ecology/Lab ★	3	
	BIOL 410^	Animal Physiology/Lab ★	3	
	BIOL 451^	Plant Physiology/Lab ★	3	
<b>Additional Upper-Level Biology Electives – Courses can come from courses not chosen above, or any 300/400 level course listed below. Additional electives may be selected from the Marine Science offerings listed below. PLE courses are only offered during the summer months through our affiliation with Pymatuning Laboratory of Ecology. (6 credits)</b>				
	BIOL 301^	Forest Ecology★ PLE	3	
	BIOL 302^	Ecology of Amphibians & Reptiles/Lab★ PLE	3	
	BIOL 303^	Behavioral Ecology/Lab★ PLE	3	
	BIOL 305^	Wetlands and Aquatic Plants/Lab★	3	
	BIOL 306^	Freshwater Biomonitoring/Lab ★	3	
	BIOL 307^	Vertebrate Ecology/Lab★ PLE	3	
	BIOL 308^	Aquatic Ecosystem Mgmt/Lab★ PLE	3	
	BIOL 310^	Plant Systematics/Lab ★	3	
	BIOL 311^	Entomology/Lab★	3	
	BIOL 313^	Herpetology/Lab★ PLE	3	
	BIOL 314^	Medical Parasitology/Lab★	1	
	BIOL 315^	Medical Mycology/Lab★	1	
	BIOL 316^	Medical Immunology/Lab★	1	
	BIOL 317^	Ecology of Fungi★ PLE	3	
	BIOL 319^	Medical Virology/Lab★	1	
	BIOL 320^	Ornithology/Lab★	3	
	BIOL 321^	Wildlife Management/Lab★ PLE	3	
	BIOL 322^	Conservation Biology/Lab★ PLE	3	
	BIOL 323^	Field Stream Ecology/Lab★ PLE	3	

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### BIOLOGY PROGRAM REQUIREMENTS

- Students desiring a Biology Major must maintain at least a 2.000 average in Biology.
- Before progressing to a 200-level course, students must achieve a 2.000 average in Principles of Biology - BIOL 104.
- Students may register in 200-level courses in any order, but must maintain a Biology average of 2.000 or better and must complete the 200 core sequence before progressing to 300 and 400-level courses in the major.
- A student must repeat any 200-level course that brings the Biology average below a 2.000.
- Students should complete all 200-level Biology requirements by the end of their sophomore year.

**GPA REQUIREMENT**  
**3.0 or higher Per Term GPA**  
**3.4 or higher Overall GPA**  
**3.2 or higher Science GPA**  
**2.0 or higher Core GPA**

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BIOL 326^	Field Methods in Biogeography/Lab★ PLE	3	
BIOL 327^	Limnology/Lab★ PLE	3	
BIOL 331^	Mammology/Lab★ PLE	3	
BIOL 343^	Embryology/Lab★	3	
BIOL 345^	Introduction to Biological Electron Microscopy★	2	
BIOL 350^	Evolution★	3	
BIOL 356^	Field Ecology/Lab★ PLE	3	
BIOL 357^	Environmental Microbiology/Lab★	4	
BIOL 360^	Field Botany★	3	
BIOL 361^	Flora of Western Pennsylvania★	3	
BIOL 371^	Vertebrate Field Zoology★	3	
BIOL 373^	Ichthyology/Lab★ PLE	3	
BIOL 375^	Ecology of Fish/Lab★ PLE	3	
BIOL 400	Disease Ecology★ PLE	3	
BIOL 402^	Biogeography/Lab★ PLE	3	
BIOL 405^	Animal Physiological Ecology/Lab★	4	
BIOL 412^	Population Biology★ PLE	3	
BIOL 430^	Pathogenic Microbiology/Lab★	3	
BIOL 450^	Biology Internship★	3	
BIOL 465^	Plant Anatomy/Lab★	3	
BIOL 470^	Histology/Lab★	3	
BIOL 498^	Selected Topics	3	
MARS 221^	Marine Invertebrates /Lab★	3	
MARS 241^	Marine Biology/Lab★	3	
MARS 250^	Wetland Ecology/Lab	3	
MARS 260^	Marine Ecology/Lab★	3	
MARS 270^	Coastal Vegetation/Lab	3	
MARS 298^	Selected Topics	3	
MARS 300^	Behavior of Marine Organ/Lab★	3	
MARS 310^	The Mammals of Coastal Ecosystems/Lab★	3	
MARS 320^	Marine Microbiology/Lab★	3	
MARS 330^	Tropical Invertebrates /Lab★	3	
MARS 342^	Marine Botany/Lab★	3	
MARS 343^	Marine Ichthyology /Lab★	3	
MARS 344^	Anatomy of Marine Chordate/Lab★	3	
MARS 345^	Ornithology/Lab★	3	
MARS 350^	Physiology of Marine Invertebrates/Lab★	3	
MARS 398^	Developmental Biology of Marine Organisms/Lab★	3	
MARS 420^	Marine Micropaleontology/Lab★	3	
MARS 431^	Ecology of Marine Plankton/Lab★	3	
MARS 441^	Biology of Molluscs★	3	
MARS 490^	Independent Study★	3	
MARS 491^	Coral Reef Ecology★	3	
MARS 492^	Marine Mammals★	3	
MARS 498^	Selected Topics	3	
MARS 500^	Problems in Marine Science★	3	
<b>Independent Study Option – Choose from BIOL490 or Non-Independent Study Option - Choose one additional 300/400 level Biology/Marine Science course from list above (3 credits)</b>			
BIOL 490~ or BIOL 3**/4** or MARS***	Independent Study or BIOL 3** or BIOL 4** or MARS ***	3	
<b>Major Field Test</b> Required of all Biology students before graduation			
FIELDTEST			

<b>Related Sciences – Chemistry (12 credits)</b>			
CHEM 108~	General Chemistry II★◇	3	
CHEM 112~	General Chemistry II Lab★	1	
CHEM 201~	Organic Chemistry I★	3	
CHEM 202~	Organic Chemistry II★	3	
CHEM 211~	Organic Chemistry I Lab★	1	
CHEM 212~	Organic Chemistry II Lab★	1	
<b>Related Sciences – Chemistry Advanced Elective (3 credits)</b>			
CHEM301~	Physical Chemistry I★	3	
CHEM335~	Biochemistry I★	3	
<b>Related Sciences – Physics (3-4 credits)</b>			
Not permitted to choose BIOL300, 314, 315, 316, 345			
PHYS213~ or any 300/400 BIOL	General Physics III / Lab★◇ or Any BIOL 300/400 level with exception of BIOL300, 314, 315, 316, 319, 345	3-4	

<b>NATURAL SCIENCE AND MATH COLLEGE-WIDE REQUIREMENTS</b>			
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	

<b>ELECTIVES</b>			