BIOLOGY COMPREHENSIVE MAJOR: PRE-NURSING EMPHASIS

Program Requirements

The Pre-Nursing Emphasis requires a minimum of 54 credits including the 26-credit Biology Nucleus, 17 additional credits in Biology, and 11 credits of supporting courses. Appropriate microbiology, chemistry, and physics courses should be selected in consultation with an advisor.

All Biology majors require the 26-credit Biology Nucleus.

Code	Title	Credits
Biology Nucleus		
BIOL 150	Biological Principles (with laboratory) (GT-SC1)	4
BIOL 151	Diversity and Patterns of Life (with laboratory)	4
BIOL 301	General Ecology	3
BIOL 310	Cell Biology	3
BIOL 312	Genetics (with recitation)	4
CHEM 111	General Chemistry I (GT-SC2)	3
CHEM 112	General Chemistry Laboratory I (GT-SC1)	1
CHEM 113	General Chemistry II	3
CHEM 114	General Chemistry Laboratory II	1
Total Credits		**26**

Code	Title	Credits
Required Biology courses		
BIOL 300	Basic Nutrition	3
BIOL 372	Human Anatomy and Physiology I (with laboratory)	4
BIOL 373	Human Anatomy and Physiology II (with laboratory)	4
One of the following:		4
BIOL 201	Introduction to Microbiology (with laboratory)	
BIOL 342	Microbiology (with laboratory)	
Select at least two credits of Capstone Experience Courses:		2
BIOL 495	Senior Seminar (may be repeated)	
BIOL 496	Senior Thesis	
Total Credits		**17**

Code	Title	Credits
Minimum supporting courses		
Appropriate Microbiology, Chemistry and Physics courses should be selected in consultation with an advisor.		
CHEM 231	Introduction to Organic Chemistry and Biochemistry	3
CHEM 234	Introductory Organic and Biochemistry Laboratory	1
MATH 213	Probability and Statistics (GT-MA1)	3
PHYS 140	Introductory Physics (with laboratory) (GT-SC1)	4

Capstone Course Requirement

The following courses in the Biology Major fulfill the capstone course requirement: BIOL 495 SENIOR SEMINAR, BIOL 496 Senior Thesis or EDUC 409 SECONDARY STUDENT TEACHING.

Graduation Requirements

Undergraduate programs require a minimum of 120 semester credits for graduation. Of those 120 credits, 40 credits must be in upper-division courses (those marked 300 and above). Fifteen of these 40 upper-division credits must be earned in courses that are part of the standard or comprehensive major program being pursued.

Students are expected to review all graduation requirements, which can be found in the Western Undergraduate Catalog: Graduation Requirements (https://catalog.western.edu/undergraduate/graduation-requirements/).

Sample Plan

Course	Title	Credits
Year One		
Fall		
BIOL 150	Biological Principles (with laboratory) (GT-SC1)	4
CHEM 111	General Chemistry I (GT-SC2)	3
CHEM 112	General Chemistry Laboratory I (GT-SC1)	1
ENG 102	Writing and Rhetoric I (GT-CO1)	3
HWTR 100	First Year Seminar	1
MATH 140	College Algebra (GT-MA1)	3
	Credits	**15**
Spring		
BIOL 151	Diversity and Patterns of Life (with laboratory)	4
ENG 103	Writing and Rhetoric II (GT-CO2)	3
CHEM 113	General Chemistry II	3
CHEM 114	General Chemistry Laboratory II	1
MATH 141	Precalculus (GT-MA1)	4
	Credits	**15**
Year Two		
Fall		
BIOL 301	General Ecology	3
CHEM 231 or CHEM 331	Introduction to Organic Chemistry and Biochemistry or Organic Chemistry I	3
CHEM 234 or CHEM 334	Introductory Organic and Biochemistry Laboratory or Organic Chemistry Laboratory I	1
Social Science GE		3
Arts & Humanities GE		3
Elective	Elective	3
	Credits	**16**
Spring		
Arts & Humanities GE		3
BIOL 310	Cell Biology	3
MATH 213	Probability and Statistics (GT-MA1)	3
PHYS 140	Introductory Physics (with laboratory) (GT-SC1)	4
Social Science GE		3
	Credits	**16**
Year Three		
Fall		
Arts & Humanities GE		3
BIOL 312	Genetics (with recitation)	4
BIOL 372	Human Anatomy and Physiology I (with laboratory)	4
Social Science GE		3
	Credits	**14**

Spring		
BIOL 300	Basic Nutrition	3
BIOL 373	Human Anatomy and Physiology II (with laboratory)	4
Elective	Elective	9
	Credits	**16**
Year Four		
Fall		
BIOL 495 or BIOL 496	Senior Seminar or Senior Thesis	1
BIOL 201 or BIOL 342	Introduction to Microbiology (with laboratory) or Microbiology (with laboratory)	4
Elective	Elective	9
	Credits	**14**
Spring		
BIOL 495 or BIOL 496	Senior Seminar or Senior Thesis	1
Elective	Elective	13
	Credits	**14**
	Total Credits	**120**