

Biological Sciences (119) Worksheet

REQUIREMENTS FOR THE MAJOR

Requirement R1: General Biology (3 courses = 10 credits)				
Course Name	Course #	Credits	Semester	Grade
General Biology I	01:119:115	4		
General Biology II	01:119:116	4		
Biological Research Lab	01:119:117	2		

Requirement R2: General Chemistry (3 courses = 9 credits) or appropriate substitution				
Course Name	Course #	Credits	Semester	Grade
General Chemistry I	01:160:161	4		
General Chemistry II	01:160:162	4		
Intro to Experimentation	01:160:171	1		

Requirement R3: Organic Chemistry (3 courses = 10 credits) or appropriate substitution				
Course Name	Course #	Credits	Semester	Grade
Organic Chemistry I	01:160:307/315	4		
Organic Chemistry II or Replacement course	01:160:308/316* or	4		
Organic Chemistry Lab	01:160:311**	2		
Notes:	*01:160:308/316 may be substituted by a 3 cr. or more, 300-400 level approved Life Science Elective or alternative course. Requires discussion with a Bio advisor to be approved. The substitute course may not be applied to other requirements for the major. **01:160:311 can be substituted with both 01:160:313+314 (Offered Summer only)			

Requirement R4: General Physics (2 courses = 6 credits) or appropriate substitution				
Course Name	Course #	Credits	Semester	Grade
Physics I	01:750:203*	3		
Physics II	01:750:204**	3		
Notes:	*01:750:203 may be replaced by 01:750:193 (4 cr.) or 201 (5 cr.). **01:750:204 may be replaced by 01:750:194 (4 cr) or 01:750:202 (5 cr.).			

Requirement R5: General Physics Lab (2 courses = 2 credits) or appropriate substitution				
Course Name	Course #	Credits	Semester	Grade
Physics I Lab	01:750:205*	1		
Physics II Lab	01:750:206**	1		
Notes:	*01:750:205 may be substituted by 01:750:193 (4 cr.) or 01:750: 201 (5 cr.). ** 01:750:206 may be replaced by 01:750:194(4 cr.) or 202 (5 cr.).			

Requirement R6: Calculus/Statistics (2 courses = 8 credits) or appropriate substitution				
Course Name	Course #	Credits	Semester	Grade
Calculus I	01:640:135/151	4		
Calculus II (or Statistics)	01:640:136/152*	4		
Notes:	*01:640:136/152 may be substituted by 01:960:401 (recommended), 01:960:379, or <u>both</u> Intro to Stats 960:211 (3cr) and 960:212 (3 cr). Students may not receive degree credit for both 960:211 and 960:401.			

Requirement R7: Genetics (1 course = 4 credits)				
Course Name	Course #	Credits	Semester	Grade
Genetics	01:447:380	4		

Requirement R8: Life Science Electives: Distributional Requirements (4 courses, 3-4 credit options for each = 12-16 credits)				
Course Requirement	Course #	Credits	Semester	Grade
146 Approved LSE:				
447/680 Approved LSE:				
694/115 Approved LSE:				
216 Approved LSE:				
Notes:	These 3-4 credit courses must be from the Approved Life Science Elective List. A maximum of 2 courses (6 credits) at the 200 level can be applied to R8. Does not include Genetics. No 100 level courses may be applied.			

Requirement R9: Life Science Electives- Laboratory Requirements (3 Lab Courses or Courses with a Lab component, 1 -4 credits each = 3-12 credits of the 24 total)				
Course Name	Course #	Credits	Semester	Grade
Lab Course 1				
Lab Course 2				
Lab Course 3 or Research/Honors in Biology				
Notes:	*Courses must be from the Approved Life Science Elective List and denoted by LAB in bold. No more than 1 lab course requirement can be fulfilled with Research or Honors in Bio courses or other approved specialized out of classroom credit bearing learning experiences. All courses for this requirement are 300-400 level.			

Requirement R10: Life Science Electives Total 24 credits of Life Science Electives, including 18 credits from upper-level (300-400 level) course options Includes courses applied to R8 and R9				
Course Name	Course #	Credits	Semester	Grade
Notes:	Includes courses applied to R8 and R9 requirements Does not include Genetics (447:380). Courses must be from the Approved Life Science Elective List. Students must complete 18 credits at the 300-400 level. A maximum of 6 credits of Research or Honors in Biology or other approved out-of-classroom learning experience can be applied toward the R10 requirement. No 100 level courses may be applied.			

COURSE REQUIREMENTS FOR DEPARTMENTAL HONORS

Course Requirement: Honors Research (may be applied toward requirements R9 and R10), please review all requirements to fulfill Departmental Honors.				
Course Name	Course #	Credits	Semester	Grade
Honors Research (Fall)	01:119:408	3-6		
Honors Research (Spring)	01:119:409	3-6		
Support Course (1 credit, Spring only, does not count toward R10)				
Honors Communication in Biology	01:119:410	1		
Notes:	Requires departmental approval, previous research experience, and 3.4 Life Sci and 3.0 Total GPA to participate. Must complete 2 semesters of Honors in Biology (3 cr. /semester), written thesis, and oral presentation. No more than 1 lab course requirement (R9) can be fulfilled with Research or Honors in Bio courses. A maximum of 6 credits of Research or Honors in Biology can be applied toward the R10 requirement.			

Please Note: Students may only apply 2 Ds toward the major and must maintain a BioSci GPA of 2.0. For additional policies, please see a [Biology Advisor](#) or review the policies and restrictions on biology.rutgers.edu or Degree Navigator.