

# Biology (B.S)

## Degree Type

Bachelor's

Students in the B.S. in Biology program at Russell Sage College obtain competency in biology (coursework, research, & internship) along with another field, which is referred to as a Companion Discipline (or track). Students in the B.S. in Biology program must complete one of the following companion disciplines: Art, Clinical Laboratory Sciences (pre-professional), Cytotechnology (pre-professional), Forensic Science, Law & Society, Preparation for Medical Studies, Management, or Writing. [76-88 credits]

## Core Requirements

Complete *all* of the following:

Item #	Title	Credits
BIO 101	General Biology I	4
BIO 101L	General Biology I - Lab	0
BIO 102	General Biology II	4
BIO 102L	General Biology II Lab	0
BIO 150	Writing in Biology	1
BIO 207	Fundamentals of Genetics	3
BIO 208	Microbiology	4
	BIO 312 or BIO 326 or BIO 336	3
BIO 359	Explorations in Research Methods	3
BIO 415	Cell and Molecular Biology	4
	BIO 401 or BIO 427	3
BIO 450	Seminar in Biology	3
	BIO Elective	3-4
	BIO Elective	3-4
CHM 111	General Chemistry I	4
CHM 112	General Chemistry II	4
CHM/PHY Course	CHM or PHY Elective Course	4
	Mathematics: MAT 112, 113, or 201	3
	Statistics: MAT 220 or PSY 207	4

## Companion Disciplines (Tracks)

- Students in the B.S. in Biology program must complete one of the following Companion Disciplines (21-29 credits):

### Art

- Complete 7 courses from [AEM](#), [AFA](#), [ARH](#), [GMD](#), or [ISD](#)

## Pre-professional Clinical Laboratory Sciences

Item #	Title	Credits
CHM 201	Organic Chemistry I	4
CHM 202	Organic Chemistry II	4
HSC 215	Health/Wellness Across Lifespan	3
PBH 201	Health and Society	3
PBH 305	Survey of Epidemiology	3
PHL 206	Ethics	3
PSY 101	Introduction to Psychology	3

## Pre-professional Cytotechnology

Item #	Title	Credits
HSC 215	Health/Wellness Across Lifespan	3
	HSC Elective	
PBH 201	Health and Society	3
PBH 305	Survey of Epidemiology	3
PHL 206	Ethics	3
PSY 101	Introduction to Psychology	3
	PSY Lifespan Development (PSY 202 or PSY 208)	3-4

## Environmental Science

- **Advising Office Note:** effective 1/24/24 the Environmental Science track is no longer enrolling new students. Please contact [academicadvising@sage.edu](mailto:academicadvising@sage.edu) for more information.

Item #	Title	Credits
BIO 130	Environmental Biology	3
BIO 326	Principles of Ecology	3
CHM 201	Organic Chemistry I	4
CHM 202	Organic Chemistry II	4
	Environmental Science Topics (9-10cr)	9

## Forensic Science

Item #	Title	Credits
BIO 209	Fundamentals of Forensics	3
CHM 201	Organic Chemistry I	4
CHM 202	Organic Chemistry II	4
CHM 303	Biochemistry	3
PHY 102	General Physics II	3
PHY 102L	General Physics II Lab	1
	CRM or LAW Elective	3
	CRM or LAW Elective	3

## Law & Society

- Complete LAW 101 (3 credits) plus 6 additional courses from CRM, LAW, PSY, or SOC (18 credits)

Item #	Title	Credits
LAW 101	Introduction to Law	3
	CRM, LAW, PSY, or SOC elective	18

## Management

- Complete BUS 205 (3 cr.) and 6 courses from ACC, BUS, or ECO (18 cr.)

Item #	Title	Credits
BUS 205	Principles of Management	3
	ACC, BUS, or ECO elective	18

## Nutrition Science

- **Advising Office Note:** effective 10/2/23 the Nutrition Science track is no longer enrolling new students. Please contact [academicadvising@sage.edu](mailto:academicadvising@sage.edu) for more information.

Item #	Title	Credits
BIO 201	Anatomy and Physiology I	4
BIO 202	Anatomy and Physiology II	4
CHM 104	Introduction to Organic & Biochemistry	4
CHM 220	Nutritional Biochemistry	3
NTR 201	Foundations of Nutrition Science	4
NTR 209	ServSafe Essentials	1
NTR 211	Introduction to Food Science	4
NTR 401	Nutrition Metabolism I: Macronutrients	3
NTR 402	Advanced Food Science	4
NTR 403	Nutrition Metabolism II: Micronutrients	3
NTR 404	Medical Nutrition Therapy I	4

## Preparation for Medical Studies

- For students interested in pursuing dental, medical, physician assistant, and veterinary studies after their bachelor degree completion.

Item #	Title	Credits
BIO 201	Anatomy and Physiology I	4
BIO 202	Anatomy and Physiology II	4
PSY 101	Introduction to Psychology	3
	PHL Elective	3
	SOC course	3
	Medical Studies Courses (9-12 credits)	9-12

## Public Health

- **Advising Office Note:** effective 10/2/23 the Public Health track is no longer enrolling new students. Please contact [academicadvising@sage.edu](mailto:academicadvising@sage.edu) for more information.

Item #	Title	Credits
PBH 201	Health and Society	3
PBH 210	Overview of Global Health	3
PBH 305	Survey of Epidemiology	3
	Public Health Selection	10-12

## Writing

- Complete 7 courses from COM, ENG, HUM, or PHL

## Degree Completion Notes

- Total credits required for a bachelor's degree (minimum): 120 credits
- Cumulative GPA required for graduation (minimum): 2.000
- Major GPA required for graduation (minimum): 2.200
- 1/2 of major requirements must be completed at Sage (minimum)
- Completion of all required [General Education](#) coursework

# Suggested Course Plan

## **Preparation for Medical Studies** - sample plan

### **Year 1 - Fall**

BIO 101 General Biology I  
BIO 101L General Biology I Lab  
BIO 150 Writing in Biology  
CHM 111/111L/111R General Chemistry I  
RSC 101 Thriving at Sage  
WRT 101 Writing in Community

### Year 1 - Spring

BIO 102 General Biology II  
BIO 102L General Biology II Lab  
CHM 112/112L/112R General Chemistry II  
PSY 101  
WRT 201 Researching in Community

### **Year 2 - Fall**

BIO 201/201L Anatomy and Physiology I  
CHM 201/201L Organic Chemistry I  
Statistics: MAT 220 or PSY 207  
General Education Course (Wellness)  
General Elective

### Year 2 - Spring

BIO 202/202L Anatomy and Physiology II  
BIO 207 Fundamentals of Genetics  
CHM 202/202L Organic Chemistry II  
RSC 201 Exp Intercultural Perspectives  
General Education Course (Art)

### **Year 3 - Fall**

BIO 208/208L Microbiology  
Biology Elective course  
RSC 301 Innovating to Impact  
PHY 101/101L/101R General Physics I  
PHL course

### Year 3 - Spring

BIO 359 Research Methods  
PHY 102/102L/102R General Physics II  
SOC course  
General Education Course (Hum)  
General Elective

### **Year 4 - Fall**

BIO 326 Principles of Ecology  
BIO 401 Indep Project

BIO 427 Internship  
BIO 450 Seminar  
General Elective

Year 4 - Spring  
BIO 401 Indep Project  
BIO 415/415L Cell and Molecular Biology  
General Education Course (Dist Elct)  
General Elective  
General Elective

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**Total Credits**

**57-59**

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