

John Carroll University Department of Biology

BS Biology with Prehealth Sample Study Plan 2023–2024 Bulletin; <https://jcubulletin.coursedog.com/programs/BL.BS>

First Year

Fall Semester	Credits	Major	Core	Minor/ Other	Spring Semester	Credits	Major	Core	Minor/ Other
BL1500 Principles of Biology I	3	X			BL1600 Principles of Biology II	3	X		
BL1505 Principles of Biology I Lab	1	X			BL1605 Principles of Biology II Lab	1	X		
CH1410 General Chemistry I	4	X			CH1420 General Chemistry II	4	X		
CH1430 General Chemistry Lab I	1	X			CH1440 General Chemistry II Lab	1	X		
EN1250 Seminar on Academic Writing	3		X		COM1251 Speech Communication	3		X	
CORE	3		X		CORE	3		X	
Total Credit Hours	15				Total Credit Hours	15			

Second Year

Fall Semester	Credits	Major	Core	Minor/ Other	Spring Semester	Credits	Major	Core	Minor/ Other
BL1700 Principles of Biology III (CMB Elective & Fall-back plan)	3	X			BL2130 Genetics or BL Elective	3–4	X		
BL1705 Principles of Biology III Lab (CMB Elective & backup plan)	1	X			CH2220 Organic Chemistry II	3	X		
CH2210 Organic Chemistry I	3	X			CH2240 Organic Chemistry II Lab	1	X		
CH2230 Organic Chemistry I Lab	1	X			DATA2280 Statistics-Biological Science	3	X	X	
MT1350 Calculus & Analytic Geometry I or DATA 2500 Intermediate Statistics with SPSS	4	X	X		PS 1010 or PS 1000 Intro to Psychology	3	X		
CORE	3		X						
Total Credit Hours	15				Total Credit Hours	14–15			

Third Year

Fall Semester	Credits	Major	Core	Minor/ Other	Spring Semester	Credits	Major	Core	Minor/ Other
BL2130 Genetics or BL Elective	3–4				CH4310 General Biochemistry*	4			
BL Elective	3–4				PH1260 General Physics II	3	X		
PH1250 General Physics I	3	X			PH1261 General Physics II Lab	1	X		
PH1251 General Physics I Lab	1	X			CORE	3		X	
CORE	3		X		CORE: SC1010	3		X	
CORE	3		X						
Total Credit Hours	15+				Total Credit Hours	14			

Fourth Year

Fall Semester	Credits	Major	Core	Minor/ Other	Spring Semester	Credits	Major	Core	Minor/ Other
BL Elective	3	X			BL Elective	4	X		
BL Elective	4	X			CORE	3		X	
CORE LINKED pair	6		X		CORE	3		X	
CORE	3		X		CORE	3		X	
					CORE	3		X	
Total Credit Hours	16				Total Credit Hours	16			

Students not taking a gap year should plan to take the MCAT in the spring semester of year 3, and prepare med school applications in the summer between years 3 and 4. The GRE or other standardized exams should be taken in the summer between years 3 and 4 for applications in year 4.

If you plan to take the MCAT in spring of year 3, consider taking a lighter load of 12-14 credits that semester. Most medical schools require two semesters of English, so consider CORE options that will fulfill this requirement.

Total Credit Hours Required for Major: 52–59

Total Credit Hours Required to Graduate: 120

Notes:

In addition to the 34-credit requirement for the major, one course must be a Cell-to-Organism course (e.g., BL2310–2320, BL3020, BL3500, BL3600, BL4100, BL4200, BL4710, or BL4750), one must be an Organism-to-Biosphere course (e.g., BL2220, BL3310, BL3700, BL4060, BL4170, BL4190, BL4230, BL4240, BL4260, BL4350, BL4400, BL4400, or BL4540), and one must be a 4000-level course

Students may count one of the following courses for Biology major credit: CH4310, CH4350, PS 3260, or PS4260 (none of these courses count as the 400-level biology requirement).

The BL electives must also be used to meet the Additional Writing (AW), Capstone (C), and Oral Presentation (OP) requirements in the major; an individual class may count for multiple categories.

Upper-level classes of interest to pre-med/dental students are listed here by semesters that they typically are offered. It is not guaranteed that each course will be offered every year or in a given semester. **Fall:** BL2310 Human Anatomy & Physiology I; BL2400 Epidemiology; BL2500 Poverty & Disease; BL4590 Molecular Cell Biology; BL4710 Immunology; and BL4750 Endocrinology. **Spring:** BL2320 Human Anatomy & Physiology II; BL3010 Introduction to Cell Biology; BL3020 Developmental Biology; BL3500 Vertebrate Anatomy; BL4100 Medical Microbiology; BL4650 Molecular Genetics; and BL4700 Molecular Methods. **Both Semesters:** BL2150 & 2155 Introduction to Biotechnology; BL3100 Microbiology; and BL3600 Human Physiology.

*Please consult your academic advisor to address specific needs of your major, minor, and/or concentration.