RAMAPO COLLEGE

School of Theoretical and Applied Science

Biology/Pre-Med Track

(for preparation to apply to Medical, Dental, Optometry and Podiatry programs)

Recommended Four-Year Plan (Fall 2023)

The recommended four-year plan is designed to provide a blueprint for students to complete their degrees within four years. Students must meet with their Major Advisor to develop a more individualized plan to complete their degree. This plan assumes that no developmental courses are required. If developmental courses are needed, students may have additional requirements to fulfill which are not listed in the plan and may extend degree completion.

NOTE: This recommended Four-Year Plan is applicable to students admitted into the major during the 2023-2024 academic year.

First Year						
Fall Semester	HRS	/	Spring Semester	HRS	1	
BIOL 111 & BIOL 111L- Fundamentals of Biology I Lecture & Lab	4+1		BIOL 113 & BIOL 113L* - Fundamentals of Biology II Lecture & Lab	4+1		
Gen Ed: Scientific Reasoning - CHEM 116 & CHEM 116L - General Chemistry I Lecture & Lab	4+1		CHEM 117 & CHEM 117L*- General Chemistry II Lecture & Lab	4+1		
Gen Ed: CRWT 102 - Critical Reading & Writing II	4		Gen Ed: Quantitative Reasoning - MATH 110 Precalculus^, MATH 121 Calculus I^, or CMPS 147 Computer Science I	4		
Gen Ed: INTD 101 - First Year Seminar	4		Gen Ed: Historical Perspectives	4		
			Career Pathways: PATH TS1 – Career Pathways Module 1	Degree Rqmt.		
Total:	18		Total:	18		

Second Year					
Fall Semester	HRS	1	Spring Semester	HRS	1
BIOL 221* - General Ecology	4		BIOL 332 & BIOL 332L* - Genetics Lecture & Lab WI	4+1.5	
CHEM 211 & CHEM 211L* - Organic Chemistry I Lecture & Lab	4+1		CHEM 213 & CHEM 213L* - Organic Chemistry II Lecture & Lab	4+1	
MATH 122* - Calculus II or ENSC 345* - Research Design & Statistics or PSYC 242* - Statistics	4		Gen Ed: AIID 201* - Studies in the Arts & Humanities	4	
Gen Ed: SOSC 110 - Social Science Inquiry	4		PSYCH 101 Intro to Psychology	4	
Career Pathways: PATH TS2 – Career Pathways Module 2	Degree Rqmt.		Career Pathways: PATH TS3 – Career Pathways Module 3	Degree Rqmt.	
Total:	17		Total:	18.5	

Third Year						
Fall Semester	HRS	1	Spring Semester	HRS	✓	
BIOL 407 & BIOL 407L* - Cell and Molecular Biology Lecture & Lab WI	4+1.5		CHEM 446 – Biochemistry II	4		
PHYS 111-Fundamentals of Physics I & PHYS 118L-Introductory Physics I Lab	4+1		PHYS 113* - Fundamentals of Physics II & PHYS 119L* - Introductory Physics II Lab	4+1		
CHEM 426 Biochemistry 1	4		Bio Elective 2	4-5.5		
Gen Ed: Global Awareness	4		Gen Ed: Culture & Creativity, Systems Sustainability & Society, or Values & Ethics**	4		
Total:	18.5		Total:	17-18.5		

Fourth Year						
Fall Semester	HRS	√	Spring Semester	HRS	/	
Bio Elective 3	4-5.5		Bio Elective 4	4-5.5		
BIOL 356* - Evolution WI	4		Elective	4		
Gen Ed: Culture & Creativity, Systems	4		Elective	4		
Sustainability & Society, or Values & Ethics**						
(Must be outside of TAS)						
Elective	4		Elective	4		
Total:	16-17.5		Total:	16-17.5		

The General Education courses can be taken in any sequence, not necessarily what is suggested here.

Total Credits Required: 128 credits

GPA Required: 2.0

Biology electives with Lab or Field experiences are up to to 5.5 credits. One of the four required Biology electives must include Lab or Field experience. Only one can be 200 level. BIOL 214/214L and BIOL 216/216L-Anatomy and Physiology I and II count as one elective. Students may also opt to choose BIOL 311/311L-Microbiology as an elective as that is a requirement for many professional programs. Some graduate professional programs require 2 psychology courses including PSYC 101 Intro to Psychology. Students are advised to speak to their advisor while planning their course of study so that those particular requirements can be met.

WI: Writing Intensive-3 required in the major

This plan is designed to allow students to take all the required courses required for most medical and professional health schools. Students are encouraged to visit the websites of specific graduate and/or professional programs that they are considering to ensure that they fulfil the specific requirements for admission to those programs.

^{*} This course has a pre-requisite. Please refer to the course catalog for information about pre-requisites.

^{**}Gen Ed Distribution Categories: two of the three categories are required. One course must be outside of the School of Theoretical and Applied Science.

[^] This course requires a CLM test for placement purposes.

⁺ Depending on the Biology electives selected, students may need to take a 5th Elective to reach 128 credits.