# RAMAPO COLLEGE

## **School of Theoretical and Applied Science**

# **Biology/Pre-Med Track**

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

Recommended Graduation Plan (Fall 2025)

The recommended graduation plan is designed to provide a blueprint for students to complete their degrees on time. Students must meet with their Academic Advisor to develop a more individualized plan to complete their degree.

**NOTE:** This recommended Graduation Plan is applicable to students admitted into the major during the 2024-2025 academic year.

CRWT Placement						
CRWT 101 to CRWT 102						
CRWT 101S to CRWT 102S						

Math Placement
MATH 021/022 to MATH 024 to MATH 110-121

NOTE: CRWT and MATH courses are determined by placement testing and should be taken following the sequence above.

First Year						
Fall Semester	HRS	<b>✓</b>	Spring Semester	HRS	<b>✓</b>	
BIOL 111 & BIOL 111L- Fundamentals of	4+1		BIOL 113 & BIOL 113L* - Fundamentals of	4+1		
Biology I Lecture & Lab			Biology II Lecture & Lab			
Gen Ed: Scientific Reasoning - CHEM 116 &	4+1		CHEM 117 & CHEM 117L*- General	4+1		
CHEM 116L - General Chemistry I Lecture &			Chemistry II Lecture & Lab			
Lab						
Gen Ed: CRWT 102 - Critical Reading &	4		Gen Ed: Quantitative Reasoning - MATH 110	4		
Writing II			Precalculus^, MATH 121 Calculus I^, or			
-			CMPS 147 Computer Science I			
Gen Ed: INTD 101 - First Year Seminar	4		Elective	1-2		
			Career Pathways: PATH TS1 – Career	Degree		
			Pathways Module 1	Rqmt.		
Total:	18		Total:	15-16		

Second Year							
Fall Semester	HRS	<b>√</b>	Spring Semester	HRS	<b>√</b>		
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		General Education Requirement	4			
General Education Requirement	4						
Career Pathways: PATH TS2 – Career Pathways Module 2	Degree Rqmt.		Career Pathways: PATH TS3 – Career Pathways Module 3	Degree Rqmt.			
Total:	17		Total:	14.5			

Third Year						
Fall Semester	HRS	<b>\</b>	Spring Semester	HRS	<	
BIOL 407 & BIOL 407L* - Cell and Molecular Biology Lecture & Lab <b>WI</b>	4+1.5		BIOL357 Immunology	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 425 Biochemistry 1	4	General Education Requirement	4	
		General Education Requirement	4	
Total:	14.5	Total:	17	

Fourth Year						
Fall Semester	HRS	<b>√</b>	Spring Semester	HRS	<b>✓</b>	
BIOL214/214L Anatomy and Physiology 1 lecture and lab	5.5		BIOL216 216L Anatomy and Physiology II lecture and lab	5.5		
BIOL311/311L Microbiology lecture and lab	5.5		BIOL 356* - Evolution <b>WI</b>	4		
General Education Requirement	4		General Education Requirement	4		
			PSYC 101 Intro to Psychology	4		
Total:	15		Total:	17.5		

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**Total Credits Required:** 128 credits

**GPA Required:** 2.0

General Education courses can be done in any order with the exception of INTD 101, CRWT and MATH. Those three general education courses will need to be done first. First Year Seminar is taken in the first semester. Failure to complete CRWT and MATH will result in a hold when the student hits 64 credits. The following general education courses can be done in any order. For more info on these courses, please visit the General Education program requirements website in the College Catalog:

- Social Science Inquiry (SOSC 110) [+W]
- Scientific Reasoning
- Historical Perspectives [+W]
- Studies in the Arts & Humanities (CRWT 102 is a prerequisite to this course) [+W]
- Global Awareness [+W]
- Distribution Category (Systems, Sustainability, & Society OR Culture & Creativity OR Values and Ethics)
  (Must be outside of TAS)
- Distribution Category
- +W: Students transferring in with 48 or more credits are waived from these general education requirements.
- \* 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.

# Biology electives with Lab or Field experiences are up 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.

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

#### 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.

<sup>&</sup>lt;sup>^</sup> This course requires a CLM test for placement purposes.