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|  | **School of Theoretical and Applied Science** |

 **Natural Sciences/Life Sciences concentration for students seeking TE certification in Biology**

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 2025-2026 academic year.

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| **CRWT Placement** |  | **Math Placement** |
| CRWT 101 to CRWT 102 |  | MATH 021/022 to MATH 024 to MATH 110-121 |
| CRWT 101S to CRWT 102S |  |  |

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

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| **First Year** |
| **Fall Semester** | **HRS** | **✓** | **Spring Semester** | **HRS** | **✓** |
| Gen Ed: INTD 101-First Year Seminar  | 4 |  | Major/ Gen Ed: Scientific Reasoning: ENSC 103 Intro Environmental Science | 4 |  |
| Major: BIOL 111/111L Funds. Biology 1 (lec/lab) | 5 |  | Major: Foundations II lec/lab course | 5 |  |
| Gen Ed: CRWT 102-Critical Reading & Writing II | 4 |  | General Education Requirement 1 | 4 |  |
| Major/Gen Ed: Quantitative Reasoning (MATH 110 or 121 or 106 or 108)2 | 4 |  | General Education Requirement 1 | 4 |  |
|  | 17 |  | Career Pathways: PATH TS1 - Career Pathways Module 1 | **DegreeRqmt.** |  |
| **Total:** |  |  | **Total:** | 17 |  |

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| **Second Year** |
| **Fall Semester** | **HRS** | **✓** | **Spring Semester** | **HRS** | **✓** |
| Major: CHEM 116/116L General Chemistry 1 (lec/lab) | 5 |  | Major: CHEM 117/117L General Chemistry 2 (lec/lab) | 5 |  |
| Major: GEOL 106+106L Funds. Earth Sci lec/lab - WI | 6 |  | Major/Gen Ed: Historical Perspectives: SCIN 295 Dev. Sci. Thought - WI | 4 |  |
| General Education Requirement 1 | 4 |  | TE/Gen Ed: Values & Ethics: EDUC 211 Student Literacy Corps | 4 |  |
|  |  |  | TE: EDUC 221 Social Context of Education | 4 |  |
| Career Pathways: PATH TS2 - Career Pathways Module 2 | **DegreeRqmt.** |  | Career Pathways: PATH TS3 - Career Pathways Module 3 | **DegreeRqmt.** |  |
| **Total:** | 15 |  | **Total:** | 17 |  |

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| **Third Year** |
| **Fall Semester** | **HRS** | **✓** | **Spring Semester** | **HRS** | **✓** |
| Major: PHYS 101 Physics for Non-Scientists | 4 |  | Major: Life Sciences Concentration course 3 | 5 |  |
| Major: Life Sciences Concentration course 3 | 4 |  | Major: Life Sciences Concentration course 3 | 5.5 |  |
| TE/Gen Ed: Social Systems and Society: EDUC 241 Instructional Technology | 4 |  | TE: EDUC 301 Meeting the needs of all learners | 2 |  |
| TE: EDUC 222 Teaching Principles & Practice | 4 |  | TE: EDUC 360 Intro to Special Education | 4 |  |
|  |  |  | Free Elective (minor, certificate, or second major requirement) 4 | 4 |  |
| **Total:** | 16 |  | **Total:** | 18 |  |

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| **Fourth Year** |
| **Fall Semester** | **HRS** | **✓** | **Spring Semester** | **HRS** | **✓** |
| Major: Life Sciences Concentration course 3 | 4 |  | Major: SCIN 435 Capstone - WI | 1 |  |
| Major: Life Sciences Concentration course 3 | 4 |  | TE/Major: EDUC 495 (fulfills experiential) | 12 |  |
| TE: EDUC 310 Methods in Content areas - math/science | 4 |  |  |  |  |
| TE: EDUC 350 Reading & Writing in the content areas | 4 |  |  |  |  |
| **Total:** | 16 |  | **Total:** | 13 |  |

**Total Credits Required:** 128 credits

**GPA Required:** 2.0

**WI: Writing Intensive-3 required in the major**

**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](https://catalog.ramapo.edu/quicklinks/gened):

* + 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 (Social Systems & 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.

1 GE Requirements: the following 3 Gen Ed requirements can be taken in any order/semester. SOSC 110 Social Science Inquiry; AIID 201 Studies in Arts & Humanities; Global Awareness. The remaining GE requirements are specific courses that double-count in the major (Math, Scientific Reasoning, Historical Perspectives) or Teacher Education (Dist. Values & Ethics, Systems & Society).

2 MATH 121 or 106 or 108 or 110.

3 Five required, can be taken in any order. At least 12 credits at the 300/400 level.

4 PSYC 347 recommended (to add Middle School certification)