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

 **Engineering Physics**

Recommended Graduation Plan (Fall 2024)

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.

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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: PHYS 116 and PHYS 116L - Physics I w/Calculus and Introductory Physics I Lab  | 4+1 |  | PHYS 117 and PHYS 117L-Physics w/ Calculus II and Introductory Physics II Lab | 4+1 |  |
| Gen Ed: MATH 121- Calculus I | 4 |  | MATH 122-Calculus II | 4 |  |
| Gen Ed: INTD 101-First Year Seminar | 4 |  | General Education Requirement | 4 |  |
| Gen Ed: CRWT 102-Critical Reading & Writing II | 4 |  | General Education Requirement | 4 |  |
|  |  |  | TAS Pathways Module 1: PATH TS1Career Assessment/Advising | **DegreeRqmt.** |  |
| **Total:** | 17 |  | **Total:** | 17 |  |

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| **Second Year** |
| **Fall Semester** | **HRS** | ✓ | **Spring Semester** | **HRS** | ✓ |
| PHYS 214-Modern Physics **WI** | 4 |  | MATH 305-Differential Equations | 4 |  |
| PHYS 215- Modern Physics Techniques and Measurements | 4 |  | CMPS 147-Computer Science I | 4 |  |
| MATH 225-Multivariable Calculus | 4 |  | PHYS 242-Electronic Circuits & Devices **WI** | 4 |  |
| General Education Requirement | 4 |  | General Education Requirement | 4 |  |
| TAS Pathways Module 2: PATH TS2Resume/CV Writing | **DegreeRqmt.** |  | TAS Pathways Module 3: PATH TS3Interview Preparation | **DegreeRqmt.** |  |
| **Total:** | 16 |  | **Total:** | 16 |  |

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| **Third Year** |
| **Fall Semester** | **HRS** | ✓ | **Spring Semester** | **HRS** | ✓ |
| PHYS Elective | 4 |  | PHYS 323-Electrodynamics I | 4 |  |
| PHYS 350-Thermodynamics | 4 |  | PHYS 322-Advanced Mechanics | 4 |  |
| PHYS Elective | 4 |  | General Education Requirement | 4 |  |
| General Education Requirement | 4 |  | Free Elective (minor, certificate, or second major requirement) | 4 |  |
| **Total:** | 16 |  | **Total:** | 16 |  |

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| **Fourth Year** |
| **Fall Semester** | **HRS** | ✓ | **Spring Semester** | **HRS** | ✓ |
| PHYS 423-Quantum Mechanics I | 4 |  | PHYS Elective | 4 |  |
| PHYS 431-Experimental Methods **WI** | 4 |  | PHYS 422-Cond. Matter & Nuclear Physics | 4 |  |
| Free Elective (minor, certificate, or second major requirement) | 4 |  | Free Elective (minor, certificate, or second major requirement) | 4 |  |
| Free Elective (minor, certificate, or second major requirement) | 4 |  | Free Elective (minor, certificate, or second major requirement) | 2 |  |
| **Total:** | 16 |  | **Total:** | 14 |  |

**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://www.ramapo.edu/catalog-2023-2024/general-education/):

* + 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.