## B.A. in Physics

Academic Program Guide for New First-Year Students (Effective Fall 2022)<br>Department of Physics \& Astronomy (physics@rowan.edu)<br>Students who entered Rowan University prior to Fall 2018 should follow the guide for their program and start year in consultation with their advisor.

## Rowan University Graduation Requirements for all Majors / Degrees

- Students must complete at least 120 semester hours (sh) of coursework that apply to their Rowan University degree.
- Students must have a cumulative GPA of at least 2.0 in Rowan University coursework. (Transfer courses/credit do not count toward the RU GPA.)
- A minimum of 30 sh of coursework must be completed at/through Rowan University.
- Only grades of "D-" or above may apply to graduation/degree requirements. (Some programs may set higher minimums.)
- Students must meet the Rowan Core and Rowan Experience Requirements.
- An individual course can potentially satisfy one Rowan Core literacy and/or multiple Rowan Experience attributes.
- Rowan Core and Rowan Experience designations are listed in course details in Section Tally (www.rowan.edu/registrar) and may also be searched on that site under "Attributes." A list of Rowan Core courses is here: https://confluence.rowan.edu/display/AS/Rowan+Core+Course+List.
- Students must apply for graduation and should do so for the term in which they will complete all program requirements.


## Rowan Core Requirements ${ }^{1}$

Students must satisfy all six Rowan Core Literacies. A minimum total of 3 sh of coursework is required to satisfy each Literacy. With the exception of the 9 sh counted here for Communicative Literacy, credits attached to the courses in this section will apply elsewhere.
(COML) Communicative Literacy: Must be met by the following three courses or their official equivalents:
$\bigcirc$ COMP 01111 College Composition I (3 sh) $\bigcirc$ COMP 01112 College Composition II (3 sh) $\bigcirc$ CMS 04205 Public Speaking (3 sh)
(ARTL) Artistic Literacy Recommendation from major:
(GLBL) Global Literacy Recommendation from major:
(HUML) Humanistic Literacy
(QNTL) Quantitative Literacy
(SCIL) Scientific Literacy
Recommendation from major: PHIL 09261 (3 sh counted under non-program)
Recommendation from major: MATH 01130 (4 sh counted under non-program)
Recommendation from major: PHYS 00220 (4 sh counted under major)
Subtotal of credits counted in this section: 9 sh

## Rowan Experience Requirements

Students must satisfy all three Rowan Experience attributes. Credits attached to the courses in this section will apply elsewhere.
(LIT) Broad-Based Literature Attribute
(WI) Writing Intensive Attribute
(RS) Rowan Seminar Attribute ${ }^{2}$

Recommendation from major:
Recommendation from major: PHIL 09261 (3 sh counted under non-program)
Recommendation from major: PHYS 00130 (1 sh counted under major requirements)

## Non-Program Courses (minimum 18 sh)

Courses in this section cannot be in the major department.

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| :--- | :--- | :--- | :--- | :--- | :---: | :---: | :---: |
| Course \# | Course Name | Course Attributes/Notes | Sem/Yr | Grade | Credits |  |  |
| CS 04 103 or 01 104 | Computer Science \& Programming or Intro to Scientific Programming | CS\&P preferred ${ }^{3}$ |  |  |  |  |  |
| PHIL 09 261 | Philosophical Perspectives on Science-WI | Satisfies Humanistic \& WI |  |  |  |  |  |
| MATH 01130 | Calculus I | Satisfies Quantitative |  | 3 |  |  |  |

Then choose one of the following course sequences:

|  | Course \# | Course Name | Course Attributes / Notes | Sem/Yr | Grade | Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\bigcirc$ | Biology sequence (take the following two courses): |  |  |  |  |  |
|  | MCB 01101 | Foundations in Biology for Biomedical Sciences I |  |  |  | 4 |
|  | MCB 01102 | Foundations in Biology for Biomedical Sciences II |  |  |  | 4 |
| $\bigcirc$ | Chemistry sequence (take the following two courses):4 |  |  |  |  |  |
|  | CHEM 06100 | Chemistry I |  |  |  | 4 |
|  | CHEM 06101 | Chemistry II |  |  |  | 4 |
| $\bigcirc$ | Computer Science sequence (take 8 credits of courses to fulfill CS Minor or CUGS): |  |  |  |  |  |
|  | CS |  |  |  |  | 4 |
|  | CS |  |  |  |  | 4 |
| $\bigcirc$ | Other sequence (proposed by student and approved by advisor): |  |  |  |  |  |
|  |  |  |  |  |  | 4 |
|  |  |  |  |  |  | 4 |
|  |  |  |  |  | Subtot | : 19 sh |

[^0]
## B.A. in Physics

Major Requirements (42 sh)

## Summary of Major Requirements

- 17 sh of Foundational Courses
- 15 sh of Mid-Level Courses
- 10 sh of Upper-Level Courses
- 42 sh total

Foundational Courses

| Course \# | Course Name | Course Designations / Notes | Sem/Yr | Grade | Credits |
| :--- | :--- | :--- | :---: | :---: | :---: |
| MATH 01 131 | Calculus II |  |  | 4 |  |
| PHYS 00 130 | Building Momentum as a Physics Student at Rowan and Beyond | Satisfies Rowan Seminar |  |  |  |
| PHYS 00 220 | Introductory Mechanics | Satisfies Scientific Literacy |  | 1 |  |
| PHYS 00 221 | Introductory Thermodynamics, Fluids, Waves, \& Optics |  |  | 4 |  |
| PHYS 00 222 | Introductory Electricity \& Magnetism |  | 4 |  |  |

## Mid-Level Courses

| Course \# | Course Name | Course Designations / Notes | Sem/Yr | Grade | Credits |
| :--- | :--- | :--- | :---: | :---: | :---: |
| MATH 01 230 | Calculus III |  |  | 4 |  |
| PHYS 00 300 | Modern Physics |  |  |  |  |
|  | Any PHYS or ASTR course |  |  | 4 |  |
|  | Any PHYS or ASTR course |  |  | 4 |  |

UPPER-LEVEL COURSES ${ }^{5}$

| Course \# | Course Name | Course Designations/Notes | Sem/Yr | Grade | Credits |
| :---: | :--- | :--- | :---: | :---: | :---: |
|  | $300+$ level PHYS |  |  |  |  |
|  | $300+$ level PHYS |  |  |  |  |
|  | $300+$ level PHYS ${ }^{6}$ |  |  |  |  |

## Free Electives for this Major/Degree (50 sh)

Students should choose Free Electives that satisfy any Rowan Core or Rowan Experience requirements that are not fulfilled by Major or Non-Program courses.

| Course \# | Course Name | Course Attributes / Notes | Sem/Yr | Grade | Credits |
| :--- | :--- | :--- | :--- | :--- | :--- |
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## Total Program Credits Required for this Major / Degree: 120 SH

[^1]
[^0]:    ${ }^{1}$ The Rowan Core requirements are waived for transfer students with an earned A.A. or A.S. degree from a NJ community/county college.
    ${ }^{2}$ The Rowan Seminar requirement is waived for all students transferring 24 or more approved credits into Rowan University at the time of initial entry.
    ${ }^{3}$ Students in a CS minor or CUGS may apply CS 04113 (or other required course) here instead and using additional courses for the CS sequence below
    ${ }^{4}$ Chemistry sequence recommended for those considering teaching, along with two more CHEM courses for Physical Science certification.

[^1]:    ${ }^{5}$ Excluding Physics/Astronomy Research I, II, III, IV (PHYS 00350 and 00 450; ASTR 11350 and 11 450)
    ${ }^{6}$ May take two instances of Physics Learning Assistant for... (PHYS 00361,00362 or 00363 ) courses to fill this slot Updated 05/14/2018

