PHYSICS (MINOR)

Minor: Physics
Program Code: M430

Physics is the study of the universe: what it is made of and how it works, ranging from stars and galaxies to atoms and nuclei and everything in between. Physics forms the foundation of many technical fields, including electronics and optics. Physics features prominently in many of the hottest areas of current research and innovation, such as the multidisciplinary fields of nanotechnology and biophysics.

A physics minor is a good complement to a mathematics, chemistry, geology, environmental science, or biology major.

Requirements

Each section below contains details about the requirements for this program. Select a header to expand the information/requirements for that particular section of the program's requirements.

To print or save an overview of this program's information, including the program description, learning outcomes, requirements, suggested course sequencing (if applicable), and advising and graduation information, scroll to the bottom of the left-hand navigation menu and select "Print Options." This will give you the options to either "Send Page to Printer" or "Download PDF of This Page." The "Download PDF of This Page" option prepares a much more concise presentation of all program information. The PDF is also printable and may be preferable due to its brevity.

Institutional Minor Requirements

The following institutional requirements apply to all CMU minors. Specific programs may have different requirements that must be met in addition to institutional requirements.

- A minor consists of 15-24 semester hours. There may be prerequisites required for the minor which will increase the total number of credit hours for a student who has not already taken those prerequisites.
- Courses taken to satisfy Essential Learning, major requirements, or electives **can** be counted toward the minor if applicable.
- At least 33 percent of the credit hours required for the minor must be in courses numbered 300 or above.
- At least 25 percent of the classes must be taken at CMU.
- 2.00 cumulative GPA or higher for the courses used for the minor.
- A minor is not a degree by itself and must be earned at the same time as a baccalaureate degree.
- A minor must be outside the major field of study.
- A student may earn up to five minors with any baccalaureate degree at CMU.
- The Catalog Year determines which program sheet and degree requirements a student must fulfill in order to graduate. Visit with your advisor or academic department to determine which catalog year and program requirements sheet you should follow.
- See “Requirements for Undergraduate Degrees and Certificates” in the catalog for a complete list of graduation requirements.

Program Specific Minor Requirements

(20 semester hours)

Code	Title	Semester Credit Hours
PHYS 131	Fundamental Mechanics-GTSC1	4
PHYS 131L	Fundamental Mechanics Laboratory-GTSC1	1
PHYS 132	Electromagnetism and Optics-GTSC1	4
PHYS 132L	Electromagnetism and Optics Laboratory-GTSC1	1
PHYS 230	Intermediate Dynamics	3
or PHYS 231	Modern Physics	
PHYS 494	Physics Seminar	1
3 semester hours of Upper Division Physics Elective		3
Select one of the following:		3
PHYS 311	Electromagnetic Theory I	
PHYS 321	Quantum Theory I	
PHYS 342	Advanced Dynamics	
PHYS 362	Statistical and Thermal Physics	
Total Semester Credit Hours		**20**

Advising and Graduation

Advising Process and DegreeWorks

Documentation on the pages related to this program is intended for informational purposes to help determine what courses and associated requirements are needed to earn a minor. Meeting with an academic advisor is essential in planning courses and developing a suggested course sequencing. It is ultimately the student’s responsibility to understand and fulfill the requirements for their intended minor.

DegreeWorks is an online degree audit tool available in MAVzone. It is the official record used by the Registrar’s Office to evaluate progress towards a minor. Students are responsible for reviewing their DegreeWorks audit on a regular basis and should discuss questions or concerns with their advisor or academic department head for the minor. Discrepancies in requirements should be reported to the Registrar’s Office.

Graduation Process

A minor cannot be awarded by itself. It must be combined with a baccalaureate degree outside the major field of study. Students should follow the graduation process outlined for the baccalaureate degree and list their majors and minors on the “Intent to Graduate” form.

If a student’s petition for graduation is denied, it will be their responsibility to consult the Registrar’s Office regarding next steps.