



## Physics Minor

### 2022-2023 Catalog

*A minimum of 24 credit hours in physics and a GPA of 2.0 in physics are required for a minor.*

Complete all of the following:

\_\_\_\_\_ PHY 230 – Principles of Physics I (5 cr.) (Prereq: MTH 201, Coreq: MTH 202)

\_\_\_\_\_ PHY 231 – Principles of Physics II (5 cr.) (Prereqs: PHY 230 and MTH 202)

\_\_\_\_\_ PHY 302 – Introduction to Modern Physics (4 cr.) (Prereq: PHY 231)

Complete 10 credits from the following:

\_\_\_\_\_ PHY 309 – Experimental Methods in Physics (4 cr.) (Prereqs: PHY 302 and SWS course)

\_\_\_\_\_ PHY 311 – Advanced Laboratory II (2 cr.) (Prereqs: PHY 309 and SWS course)

\_\_\_\_\_ PHY 320 – Optics (3 cr.) (Prereq: PHY 231)

\_\_\_\_\_ PHY 325 – Numerical Problem-Solving Methods (3 cr.) (Prereq: PHY 231, PHY 302 recommended)

\_\_\_\_\_ PHY 330 – Intermediate Mechanics (4 cr.)

(Prereqs: PHY 230, or permission of instructor, and MTH 302 or MTH 304)

\_\_\_\_\_ PHY 340 – Electromagnetic Fields (4 cr.) (Prereqs: PHY 231 and MTH 302 or MTH 304)

\_\_\_\_\_ PHY 350 – Introduction to Quantum Mechanics (4 cr.)

(Prereqs: PHY 302 and MTH 302 or MTH 304, MTH 300 recommended)

\_\_\_\_\_ PHY 360 – Statistical Thermodynamics (4 cr.) (Prereq: PHY 231)

\_\_\_\_\_ PHY 370 – Solid State Physics (3 cr.) (Prereqs: PHY 302 and MTH 302 or MTH 304)

\*PHY 105 is strongly encouraged for students seeking teacher certification for secondary teaching with Physics minor. Therefore, PHY 105 may be counted as part of the additional 10 hours in physics courses for those students, but this option is not open to students seeking a minor in physics in programs other than secondary education.

#### Notes:

1. Most physics courses have math prerequisites.
2. All students seeking teacher certification are required to assist for at least 30 clock hours in the department's tutoring program or at least 30 clock hours as a laboratory assistant setting up equipment and demonstrations as well as helping students in a laboratory setting. Required reading and experience in laboratory safety will be part of this laboratory setting.
3. Students seeking certification to teach at the secondary level must have a minimum GPA of 2.7 for the minor.

**It is imperative to meet with your faculty advisor or an advisor in the CLAS Academic Advising Center early in your career.**

The CLAS Academic Advising Center is located in C-1-120 MAK, 616-331-8585.

Online at: <http://www.gvsu.edu/clasadvising>

Prepared by CLAS Academic Advising Center –updated March 2022