COLLEGE OF LIBERAL ARTS AND SCIENCES (CLAS) ACADEMIC ADVISING CENTER 2025-2026

PHYSICS- BS – MTH 124 START

THIS IS A **GENERAL** CURRICULUM GUIDE AND IS NOT APPLICABLE TO EVERY STUDENT. IT IS IMPORTANT TO MEET WITH YOUR ADVISOR.

Year One			
CHM 125 Principles of Chemistry I Prerequisites: High school chemistry and (MTH 110 or MTH 122 or MTH 125 or MTH 201, CHM 126 (corequisite))	3 *(6)*	[3]CIS 162 Computer Science I Prerequisite: MTH 110 or MTH 109	4
CHM 126 Principles of Chemistry I (Lab)	1	[1]MTH 201 Calculus I Prerequisites: MTH 122 & MTH 123 or MTH 124 or Math placement exam	4
[1]MTH 124 Precalculus: Functions and Models Prerequisite: MTH 110 or 109 or Placement	5	[2]WRT 130 or WRT 150 Strategies in Writing (*self-placement*)	3-4
General Education (Arts) or [2]WRT 120 (*self-placement*)	3	General Education (Life Science w/no Lab)	3
General Education (Philosophy & Literature)	3	[4]Elective (if needed)	1
Numbers noted within (parentheses) are contact hours *Total*	*15*	*Total*	*15*
Year Two			
MTH 202 Calculus II Prerequisite: MTH 201	4	[6]MTH 204 Linear Algebra I (required if taking MTH 304) Prerequisite: MTH 122 & 123 or MTH 124 or Math placement exam	3
PHY 230 Principles of Physics I (w/Lab) Prerequisite: MTH 201; Corequisite: MTH 202	5 *(7)*	***OR*** Elective	or 3
[5]General Education (*SWS if needed*) (Historical Analysis)	3	MTH 203 Calculus III Prerequisite: MTH 202	4
General Education (Social Behavioral Science)	3	**PHY 231** Principles of Physics II (w/lab) Prerequisites: MTH 202 & PHY 230	5 *(7)*
Total	*15*	*Total*	*15*
Year Three			
[6]MTH 302 Linear Algebra & Differential Equations Prerequisite: MTH 203	4	**PHY 302** Introduction to Modern Physics Winter Only Prerequisite: PHY 231	4 *(6)*
OR [6]MTH 304 Analysis of Differential Equations Prerequisites: MTH 202 & MTH 204	or 3	**PHY 360** Statistical Thermodynamics Winter Only Prerequisite: PHY 231	4
PHY 330 Intermediate Mechanics Fall Only Prerequisites: PHY 230 and (either MTH 302 or MTH 304) or permission of the instructor.	4	**PHY 340** Electromagnetic Fields Winter Only Prerequisites: PHY 231 & either (MTH 302 or MTH 304)	4
		General Education (U.S. Diversity + Global Perspective)	3
General Education (Social Behavioral Science)	3	***OR*** [8]MTH 300 Vector Analysis Winter Only Prerequisite: MTH 203	or 3
[7]Science Elective	3		
[4]Elective	1-2		
Total	*15*	*Total*	*15*
Year Four			
[8]MTH 401 Mathematics for the Physical Sciences Fall Only Prerequisites: MTH 302 or 304, PHY 231, or permission of instructor	4	[5]**PHY 311** Advanced Laboratory II (*SWS*) Winter Only Prerequisites: PHY 309 & a Supplemental Writing Skills (SWS) class	2 *(6)*
OR General Education (U.S. Diversity + Global Perspective)	or 3	**PHY 486** Senior Physics Project (*Capstone)* Winter Only Prerequisites: PHY 485	2 *(9)*
[6]**PHY 309** Experimental Methods in Physics (*SWS*) Fall Only Prerequisites: PHY 302 & a Supplemental Writing Skills (SWS) class	4 *(6)*	[7]Science Elective	3
PHY 350 Introduction to Quantum Mechanics Fall Only Prerequisites: PHY 302 & either (MTH 302 or 304). MTH 300 recommended	4	Issues	3
		Issues	3
PHY 485 Senior Physics Project (*Capstone*) Fall Only Prerequisite: Senior physics students & good academic standing	1 *(5)*	[4]Elective	1
General Education ***OR*** [4]Elective (if needed)	2-3		
Total	*15*	*Total*	*15*

Physics major students must complete 39 semester credit hours of required physics courses with a minimum grade of C (2.0) in each course. A major GPA, and a cumulative GPA of a 2.0 or higher are both required to graduate.
Transfer students must complete at least 11 credit hours in physics courses taken at Grand Valley at the 300-level or above.

[1]Students must take MTH 110 (or 108+109), and MTH 124 (or 122+123) or waive these courses through Grand Valley math placement to take MTH 201. These courses do not count towards the completion of the Physics major. ***To take the Math Proficiency Tests online, visit: www.gvsu.edu/s/mv***

It is imperative to meet with your ***FACULTY ADVISOR*** and an ***ADVISOR IN THE CLAS ACADEMIC ADVISING CENTER*** regularly.

[2] Students who self-place into WRT 120 should take this course in the fall semester and then take WRT 130 in the winter semester of their first year. WRT 150 can be taken in either semester during their first year. A grade of C or better (***NOT A C-***) is required in WRT 130 or 150 to satisfy the WRT requirement.

[3]See faculty advisor for additional options for computer science courses.

[4]Students must have a minimum of 120 credits to graduate with 58 of the 120 credits being from a senior level institution and the final 30 of the 120 credits completed at GVSU. "Elective" refers to any course outside of gen eds and the major that will help meet these requirements. ***OMIT?*** Students who plan to apply to graduate school in physics should take PHY 430, 440, and 450, which are offered alternate years; please confer with your physics faculty advisor for a specific degree plan dependent on when you complete PHY 230.

[5]Students must complete at least 2 courses with an SWS attribute.

[6]Physics majors are required to complete one of these two Advanced Math Options: 1. Both MTH 204 and MTH 304, or 2. MTH 302. Students intending to go to graduate school should take MTH 204 & MTH 304 rather than the MTH 302 option. Please see faculty advisor for assistance in choosing appropriate course.

[7]Students must complete 6 hours of science electives with a minimum grade of C **(NOT C-)** in each. See below for course options.

[8] The major requires students to take either MTH 300 or MTH 401. MTH 401 is recommended instead of MTH 300 for students planning to pursue graduate school, please see faculty advisor for assistance in choosing appropriate course.

*The block tuition rate is for 12-15 credits. You will pay additional tuition for any credits over 15. For more information contact the Office of Financial Aid.

[7]The Physics major requires 6 credits in science electives from the following courses:

Offered in Fall Semesters only:

CHM 351 Introduction to Physical Chemistry (3 credits)
Prerequisite: CHM 116, MTH 201, and (PHY 220 or 230); may be taken concurrently.

CHM 356 Physical Chemistry I (3 credits)
Prerequisite: CHM 116, MTH 202, and PHY 230

PHY 325 Numerical Problem Solving Methods in Physics (3 credits)
Prerequisite: PHY 230 and PHY 231. PHY 302 is recommended.

Offered in Winter Semesters only:

CHM 358 Physical Chemistry II (3 credits)
Prerequisite: CHM 356 and PHY 231, may be taken concurrently

PHY 370 Solid State Physics (3 credits) – odd numbered years
Prerequisite: PHY 302 and either (MTH 302 or MTH 304

Offered in both Fall and Winter Semesters:

CHM 352 Physical Chemistry Laboratory (1 credit)
Prerequisite: CHM 351 or CHM 356; either may be taken concurrently.

PHY 105 Descriptive Astronomy (3 credits)
Prerequisite: None

PHY 399 Readings in Physics (1-4 credits)
Prerequisite: Permission of Instructor

PHY 380 and PHY 480 Special Topics in Physics (1-4 credits)
Prerequisite: Varies by topic

PHY 499 Research in Physics (1-4 credits)
Prerequisite: Permission of Instructor

Declaring the Physics Major:

1. In myBanner, select "Student" > "Student Records" > "Change Major" > "Change Major 1/Program."
2. Choose "Physics-BS" from the drop-down box.
3. Click "Submit" and then "Change to New Program."

General Education Overlap

General Education Categories fulfilled by the Physics Major:	
Mathematical Sciences: MTH 201	Physical Science with Lab: CHM 115

- The CLAS Academic Advising Center is located in C-1-120/140 MAK, 616-331-8585 http://www.gvsu.edu/clasadvising
- Preprofessional Students (Prechiropractic, Predental, Premedical, Preoptometry, Prepharmacy, Prepodiatry, & Preveterinary) can find more information on Preprofessional programs at www.gvsu.edu/clasadvising/preprofessional
- To schedule an appointment with a Physics and/or Preprofessional Advisor in the CLAS Academic Advising Center, visit www.gvsu.edu/clasadvising and click on "Schedule Appointment."