

**Course:** PHY 203

**Course Title:** Foundations of Physics

**Credit Hours:** 5

**Department:** Physics, Astronomy, & Materials Science

**Prerequisite:** *MTH 261 (completed); or MTH 261 (concurrent enrollment) and ACT mathematics score equal to more than 29.*

*May also receive credit for this course through Advanced Placement*

**General Education Area:**

NATURAL WORLD - Physical Sciences (*GEC 108 (w/lab) / GEC 109 (no lab)*)

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*Information submitted by a department representative on 4/30/2021 3:35:32 PM – Compiled by Darren Wienberg, Academic Advising & Transfer Center*

**Typically Offered During:**

Fall Full Semester:	YES	Fall 1 <sup>st</sup> Block:	NO	Fall 2 <sup>nd</sup> Block:	NO
Spring Full Semester:	YES	Spring 1 <sup>st</sup> Block:	NO	Spring 2 <sup>nd</sup> Block:	NO
Summer:	NO				

**Typical Instructional Modality:**

Traditional (seated):	YES	Blended:	YES	Internet:	NO
Online Video:	NO	Web Conference:	NO		

**May Also Count Toward Department Offering:**

Major:	YES	Minor:	YES	Certificate:	YES
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*Please see online published semester class schedule and undergraduate catalog for detailed course offering information.*

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***How do you describe the course to students when they ask “What is this class about?” (Without using the catalog description)?***

Physics is the science which describes how things in our world interact. This can be from molecules to the largest structures in our universe. In this course, we will examine these interactions and what happens because of these interactions. We will also use the language of mathematics to solve problems, make models, make testable predictions based on those models, and predict what will happen from interactions. For a physics course with lighter emphasis on mathematics see PHY123 or see PHY100 for a general science course.

***Beyond meeting a General Education requirement, what benefits can students realize from choosing this course?***

Learning problem analysis and solution; Learning details of how interactions between parts contribute to interactions with the whole; Learning to use instruments to control and measure the happenings around us.

***Other than your major/minor/certificate students, what groups of students could find this course relevant to their degree program or career path?***

Many disciplines require this calculus-based physics course as a requirement for their programs such as physics majors and engineering majors for example. Please check your individual programs to see if the calculus-based physics course is required. However, students in other disciplines benefit from this course, irrespective of requirements. Other STEM majors, such as chemistry, biology, computer science, medical science, mathematics, or geology majors, benefit from the more in-depth science, applied mathematics, and modeling that this course provides. Furthermore, students in any discipline where calculus is used will get more practice in applying these mathematical principles in this course.

***Catalog Description (Fall 2022 Undergraduate Catalog)***

Students must be skilled in using the Microsoft Excel spreadsheet program (see the Department of Physics, Astronomy, and Materials Science for a list of required spreadsheet skills). First of two semesters in basic calculus physics. Lecture and laboratory topics covered include mechanics, waves, and thermodynamics. A grade of "C" or better is required in this course to take PHY 204.