

# Honors Physics I

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Last Updated: Mon, 01/12/2026

**Course prefix:** PHYS

**Course number:** 2231

**Section:** A

**CRN**

28864 28865

**Instructor first name:** Sven

**Instructor last name:** Behrens

**Semester:** Spring

**Academic year:** 2026

**Course description:**

This 5 credit hour course covers fundamental topics in Classical Mechanics. It is the Honors version of PHYS 2211, intended for students who want a more rigorous treatment of the subject matter. The course is designed for physics majors and very curious engineering/science students. Topics include Vectors and Kinematics, Newton's Laws, Particle Dynamics, Conservation Laws, Rotational Dynamics, Gravitation and Orbital Motion, and Oscillations. In addition to the lectures, the course includes a laboratory component. Two-thirds of the scheduled weekly Lab contact hours are devoted to conventional laboratory experiments, whereas one third of the contact hours are used for Problem Solving Studio sessions, in which students work collaboratively to identify essential physics concepts in a variety of contextual situations, and to formulate a systematic, organized solution to the problem identified.

**Academic honesty/integrity statement:**

Students are expected to maintain the highest standards of academic integrity. All work submitted must be original and properly cited. Plagiarism, cheating, or any form of academic dishonesty will result in immediate consequences as outlined in the university's academic integrity policy.

**Core IMPACTS statement(s) (if applicable):**

**This is a Core IMPACTS course that is part of the Technology, Mathematics & Sciences area.**

Core IMPACTS refers to the core curriculum, which provides students with essential knowledge in foundational academic areas. This course will help master course content,

and support students' broad academic and career goals.

This course should direct students toward a broad **Orienting Question**:

- How do I ask scientific questions or use data, mathematics or technology to understand the universe?

Completion of this course should enable students to meet the following **Learning Outcome**:

- Students will use the scientific method and laboratory procedures or mathematical and computational methods to analyze data, solve problems and explain natural phenomena.

Course content, activities and exercises in this course should help students develop the following **Career-Ready Competencies**:

- Inquiry and Analysis
- Problem-Solving
- Teamwork