

JAMESTOWN COMMUNITY COLLEGE
State University of New York

INSTITUTIONAL COURSE SYLLABUS

Course Title: Foundational Physics

Course Abbreviation and Number: PHY 1500

Credit Hours: 4

Course Type: Lecture/Lab

Course Description: Students will use various experiments to learn the fundamental phenomena, principles, and laws of physics. Topics will include: motion, Newton's laws, torque, and the principles of work and energy. Students will look at physics both conceptually, where verbal reasoning will be emphasized, as well as quantitatively, where students will utilize algebra to model the physical world. No previous knowledge of physics is assumed.

Eligibility: MAT 1590 or higher or prerequisite: MAT 1500; Prerequisite/Corequisite: ENG 1510.

General Education Requirements Met

SUNY

Natural Sciences

JCC

Scientific Reasoning

Student Learning Outcomes:

Students who demonstrate understanding can:

1. Apply the concepts of kinematics, dynamics, and energy to solve problems in mechanics and motion.
 2. Demonstrate an understanding of the methods scientists use to explore natural phenomena, including observation, hypothesis development, measurement and data collection, experimentation, evaluation of evidence, and employment of mathematical analysis [SUNY Gen Ed – Natural Sciences]
 3. Demonstrate an understanding of the application of scientific data, concepts, and models in one of the natural sciences. [SUNY Gen Ed – Natural Sciences]
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Topics Covered:

- Measurements and units
 - Concepts of kinematics
 - Forces and Newton's Laws
 - Torques and moments
 - Energy and motion
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Information for Students

- Expectations of Students
 - [Civility Statement](#)
 - [Student Responsibility Statement](#)
 - [Academic Integrity Statement](#)
- [Accessibility Services](#)

Students who require accommodations to complete the requirements and expectations of this course because of a disability must make their accommodation requests to the Accessibility Services Coordinator.

- [Get Help: JCC & Community Resources](#)
- [Emergency Closing Procedures](#)

- Course grade is determined by the instructor based on a combination of factors, including but not limited to, homework, quizzes, exams, projects, and participation. Final course grade can be translated into a grade point value according to the following:

A=4.0	B+=3.5	B=3	C+=2.5	C=2	D+=1.5	D=1	F=0
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- Veterans and active duty military personnel with special circumstances (e.g., upcoming deployments, drill requirements, VA appointments) are welcome and encouraged to communicate these to the instructor.
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Effective Date: Fall 2022