PHY 201 General Physics Syllabus Fall 2025

Portland Community College — Cascade Campus P.O. Box 19000
Portland, OR 97280-0990

Instructor: Jericho Cain, PhD **Office:** Virtual (see D2L)
Email: jericho.cain@pcc.edu **Course:** CRN 40113 — 4 credits
Meets:
Lecture — Tuesday 9:00 AM to 11:50 AM, Jackson Hall Room 113
Lab — Tuesday 1:00 PM to 3:50 PM, Jackson Hall Room 113

Office Hours: By appointment **Final Exam:** 12/13/2025

Prerequisites/concurrent: MTH 111 and its prerequisite requirements. Audit available.

Course Description: This course introduces the principles of classical mechanics, with an emphasis on applications relevant to life science, pre-medical, and technology-oriented fields. Topics include linear and two-dimensional motion, forces and Newton's laws, energy, momentum, circular motion, and rotational dynamics. The course is algebra-based and designed for students pursuing science-related majors, including pre-medical, pre-dental, pre-chiropractic, and pre-physical therapy tracks.

Students will gain both conceptual understanding and practical experience through integrated laboratory activities, quantitative problem-solving, and the exploration of physics in real-world and technological contexts.

For more information, see the Course Content and Outcomes Guide (CCOG) www.pcc.edu/ccog

Textbook: Physics by Cutnell and Johnson 12E. (Editions 10-12 are acceptable)

College Physics by Knight and College Physics by Serway (any editions) are excellent supplementary textbooks.

Required Materials: Scientific Calculator (not a cell phone), Textbook

Add/drop/withdraw deadlines: http://www.pcc.edu/registration/dropping.html

Grading Criteria: 60% Tests (3), 10% Homework (9), 30% Lab (9)

A = 100% to 90% **B** = 89% to 80% **C** = 79% to 70% **D** = 69%-55% **F** = 54% to 0%

PCC Grading Guidelines: www.pcc.edu/student-records/grading

Exams

There will be three exams during the term. The first two exams will each cover three chapters and be worth 15% of your final grade

The final exam will be partially cumulative and weighted more heavily, counting for 30% of your final grade

Homework: Homework will be assigned regularly and must be submitted through D2L. While it will not be graded for accuracy, it will be evaluated for completeness. Full solutions will be provided after each assignment is submitted.

Labs: Each lab will include a worksheet that must be completed legibly and thoughtfully, with clear responses to all preliminary and analysis questions. A lab report, following the provided template, must be attached to the worksheet and must include all data tables, plots, and calculations. Incomplete reports may receive reduced credit. You are allowed a single dropped grade for labs. Any missed labs beyond that one will result in a zero.

Attendance Policy: Regular attendance at both lecture and lab sessions is required. Consistent participation is essential for mastering the material and performing well on assignments and exams. Please communicate promptly if you anticipate missing a class.

ADA Statement: Students with disability-related barriers are encouraged to contact Disability Services at www.pcc.edu/disability. If you choose to use approved accommodation, you must provide formal notification from Disability Services in advance.

Title IX / Nondiscrimination Statement: PCC is committed to a learning and working environment based on mutual respect and open communication. If you experience or witness sexual harassment, discrimination, or misconduct, contact the Office of Equity and Inclusion at (971) 722-5840 or equity.inclusion@pcc.edu.

Sanctuary Policy: PCC supports undocumented students. For more information, see www.pcc.edu/resources/undocumented-students.

Flexibility Statement: The course calendar and due dates are subject to change based on weather, institutional policy, or class progress. Every effort will be made to communicate changes promptly and accommodate students' needs.

Student Rights and Responsibilities: Students must adhere to the Student Rights and Responsibilities Handbook, including the Code of Conduct and Academic Integrity Policy. Examples of violations include:

- Copying assignments from other students or past terms

- Plagiarizing from websites without proper citation
- Using unauthorized materials during exams

Violations will result in a zero on the assignment and may be referred for disciplinary action.

Class Schedule – Subject to Change

Date	Chapter	Topic/Lab/HW Due Dates
09/27/2025	**Chapter 1:** Introduction and Mathematical Concepts	Lab 1: Measurement, Graphing, and Prediction
10/04/2025	**Chapter 2:** Kinematics in One Dimension	Lab 2: Modern Galileo Experiment HW 1 Due Lab 1 Due
10/11/2025	**Chapter 3:** Kinematics in Two Dimensions **Review:** Chapters 1-3	Lab 3: Projectile Motion HW 2 Due Lab 2 Due
10/18/2025	**Chapter 4:** Forces and Newton's Laws of Motion	Exam 1: Chapters 1-3 HW 3 Due Lab 3 Due
10/25/2025	**Chapter 5**: Dynamics of Uniform Circular Motion	Lab 4: Newton's 2nd Law HW 4 Due
11/01/2025	**Chapter 6:** Work and Energy	Lab 5: Equilibrium of Forces Lab 4 Due
11/08/2015	**Chapter 6:** continued Review: Chapters 4-6	Lab 6: Static and Kinetic Friction HW 5 Due Lab 5 Due
11/15/2025	**Chapter 7:** The Impulse Momentum Theorem	Exam 2: Chapters 4-6 HW 6 Due Lab 6 Due
11/22/2025	**Chapter 8**: Rotational Kinematics	Lab 7: Work and Kinetic Energy
11/29/2025	**Chapter 9:** Rotational dynamics	Lab 8: Momentum and Impulse in Collisions HW 7 Due Lab 7 Due
12/06/2025	**Chapter 9:** continued **Review:** Chapters 7-9	Lab 9: Torque HW 8 Due Lab 8 Due
12/13/2015	Final Exam	Final Exam HW 9 Due Lab 9 Due