University of New Hampshire

PHYS 401 Introduction to Physics I

Syllabus, Fall 2025 (Evening IPFF*)

Contents

*In Person/Face-to-Face

1 Instructor Information

1.1 Contact Information

Professor Hopper
Adjunct Faculty
UNH Manchester
Department of Applied Engineering & Sciences
adam.hopper@unh.edu (primary method of contact, expected response time: 24-48 hours)

1.2 Office Hours

The instructor is available during the following hours:

Office hours to be determined.

Other meeting times may be arranged by appointment.

2 Course Information

2.1 Scheduled Meeting Times

8/25/2025 - 12/8/2025
- 6:10pm - 9:00pm MW PANDRA 301

2.2 Final Exams

12/9/2025	Final Exams begin at 6:00pm
12/16/2025	Final Exams end

2.3 Course Description

PHYS 401 Introduction to Physics I (4 credits[1]): Broad survey of classical physics including Newtonian mechanics and fluids. Designed to enable students to appreciate the role of physics in society and technology. Emphasizes the fundamental laws of nature on which all science is based, with applied examples of interest to Life Science. Knowledge of high school algebra, geometry, and trigonometry essential. This course has a lab component. Students must also register for a particular lab. Lab.

Prerequisites: Knowledge of high school algebra, geometry, and trigonometry is essential. However, we will be sure to review mathematical tools as we need them and link the mathematics to the physical and biological concepts.

Department: UNH Manchester, Department of Applied Engineering & Sciences

Attributes: Physical Science (Discovery), Discovery Lab Course[3]

2.4 Course Format

This course has an evening IPFF course format which means that we plan to meet **on campus** throughout the semester. This course will consist of lectures, group and peer discussions, problem solving sessions, and laboratory experiments. Students will be assessed with regular homework, quizzes, lab reports, exams, and a final exam. Discussions will often be initiated by student questions, which are encouraged and welcomed.

[1] **Credit Hour Policy**[2]
[3] **Discovery Program & Requirements**[4]

2.5 Course Materials

Text (Not Required)

Knight, Jones, and Field. *College Physics: A Strategic Approach* (4th ed.), 2019.
A loose-leaf version of the text is available (ISBN: 9780134700502).

Required Material

- Access code for **MasteringPhysics**[5], ISBN: 9780136782216 (single-term access) OR 9780134703930 (multi-term access)
  The ebook is included in this package.
- TI 83 or 84 graphing calculator or comparable (no stronger)

Note: Students are expected to enroll in the online portion of the course with **permanent (not temporary) access** by no later than **September 5, 2025** (which is the last day to drop the course for a full refund). **Students who fail to meet this deadline will receive an Academic Early Alert.** Students are responsible for contacting Pearson Technical Support to resolve any problems with creating or logging in to their accounts.

Temporary access is available for those students awaiting financial aid. **Be sure to follow the instructions for making a temporary account permanent on or before the enrollment deadline.** Maintaining access to the MasteringPhysics web site is the student's responsibility. If a student enrolls using temporary access, the student is expected to convert to permanent access before the temporary access expires. Assignments from duplicate accounts cannot be merged and, therefore, will not be accepted.

3 Assessment

3.1 Homework

Completion of homework is necessary for mastery of the material. Students who do not keep up with their homework will find successful completion of this course difficult. Students who do their homework typically have higher test grades and contribute more productively to class discussions.

Homework will be given online, through the MasteringPhysics website. This automated system gives instantaneous, personalized feedback. **The grading policy for homework is available at the top of every assignment—be sure to review this policy early in the semester.**

Late Homework Policy

Late homework will be assessed a 25% penalty per day, to a maximum penalty of 50%.

3.2 Reading Quizzes

Reading quizzes will be given online, through the MasteringPhysics website. They will be due an hour before the class meeting in which the material will be covered. Do not begin a reading quiz until you have read the relevant chapter of the text. Reading quizzes should take about 15 minutes to complete. Students have 30 minutes to complete reading quizzes. **The grading policy for reading quizzes is available at the top of every assignment—be sure to review this policy early in the semester.**

Make-up Reading Quiz Policy

Late reading quizzes will receive a score of zero. One reading quiz grade will be dropped.

[5] MasteringPhysics, https://www.pearsonmylabandmastering.com

3.3 Labs

The lab is an essential component of this course. Labs provide an opportunity to apply the physical principles learned in lecture, to use the scientific method, to develop technical writing skills, and to work with other students towards a common scientific goal. Each student is responsible for writing his or her own lab report. Plagiarism violates **Student Policies and Regulations on Academic Integrity**[6] and will be dealt with appropriately. **Lab attendance is of the utmost priority; students are expected to attend each lab.** Lab reports will be due one week after the lab is performed, **at the start of lab**. Lab reports must be printed single-sided and stapled.

A student that has not completed every lab and turned in every lab report in full by the end of the semester will receive a grade of F for the course.

Late Report Policy

Late lab reports will receive a score of zero. One lab report grade will be dropped.

Make-up Lab Policy

Make-up labs are given in the cases of **scheduled absences** and **true emergencies** for which appropriate documentation or an acceptable rationale is provided.

Make-up labs will be made by appointment.

3.4 Exams

Student mastery of the course material will be assessed through **regular exams** and a comprehensive **final exam**. Any change to the exam schedule will be communicated in a timely manner. **Exam dates are of the utmost priority; students are expected to take each exam on the scheduled date.** If class is canceled on the day of an exam, students should be prepared to take the exam on the next meeting of the class. All students are required to take the final exam. **Exams will be proctored.**

Make-up Exam Policy

Make-up exams are given in the cases of **scheduled absences** and **true emergencies** for which appropriate documentation or an acceptable rationale is provided. Make-up exams will be made by appointment. Unless otherwise indicated by the instructor, a make-up exam must be taken before the next class meeting after the scheduled exam date.

3.5 Grading Policy

The grade a student earns is based solely on their mastery of the material. Grades will be computed according to the following weighting scheme, and maintained on **Canvas**[7]. No additional assignments will be offered for credit.

Component	**Weight**
Homework	10%
Reading Quizzes	2%
Labs	20%
Regular Exams	$2 \times 24\% = 48\%$
Final Exam	20%

Mid-term and final grades are determined according to the following chart.[8]

[6] Student Policies and Regulations on Academic Integrity, https://catalog.unh.edu/srrr/student-policies-regulations/academic-integrity/

[7] Canvas, https://unh.instructure.com/

[8] Note: $90 - < 94$ is shorthand to indicate that to earn the corresponding letter grade of **A**−, the numerical course grade x must satisfy $90 \leq x < 94$.

		B+	$87 - < 90$	**C+**	$77 - < 80$	**D+**	$67 - < 70$		
A	$94 - < 100$	**B**	$84 - < 87$	**C**	$74 - < 77$	**D**	$64 - < 67$	**F**	$0 - < 60$
A−	$90 - < 94$	**B−**	$80 - < 84$	**C−**	$70 - < 74$	**D−**	$60 - < 64$		

4 Other Policies

4.1 Resources

- **Academic Catalog**[9]
- **Academic Policies and Procedures**[10]
- **Attendance Policy**[11]
- **Student Handbook (Student Rights, Rules, and Responsibilities)**[12]
- **Academic Integrity**[13]

- **Current Student Resources**[14]

- **Academic Calendar**[15]
- **Academic Support**[16]
- **Student Services**[17]
- **Student Accessibility Services**[18]

- **Emergency Alerts (Rave Mobile Safety)**[19]
- **Knack Peer Tutoring**[20]

4.2 Attendance Policy and Missed Work

Attendance is expected, required, and recorded.

From the **Attendance Policy**: *"When students absent themselves from class to such extent that their own progress or that of the class or group is seriously impaired, they will be reported to the dean of their college by their instructor. When reports are received by a college dean, the dean will consider each student's class standing, academic record, and other pertinent factors; the dean may then a.) warn the student against continued absences by letter or by interview, b.) place the student on scholastic warning or c.) report the student to the Academic Standards and Advising Committee for a decision as to whether the student shall continue in the University."*

Students are responsible for obtaining missed material and are required to complete assignments with the expectation that the student will take each exam when scheduled. All coursework (except the final exam) must be completed by 12/8/2025.

4.3 Important Dates

See the **Academic Calendar** on the UNH website.

[9] Academic Catalog, https://catalog.unh.edu/undergraduate/
[10] Academic Policies and Procedures, https://catalog.unh.edu/undergraduate/academic-policies-procedures/
[11] Attendance Policy, https://catalog.unh.edu/undergraduate/academic-policies-procedures/attendance/
[12] Student Handbook (Student Rights, Rules, and Responsibilities), https://catalog.unh.edu/srrr/
[13] Academic Integrity, https://catalog.unh.edu/srrr/student-policies-regulations/academic-integrity/
[14] Current Student Resources, https://manchester.unh.edu/student-experience/current-students
[15] Academic Calendar, https://manchester.unh.edu/academics/academic-calendar
[16] Academic Support, https://manchester.unh.edu/academics/academic-support
[17] Student Services, https://manchester.unh.edu/academics/student-services
[18] Student Accessibility Services, https://manchester.unh.edu/academics/student-accessibility-services
[19] Emergency Alerts (Rave Mobile Safety), https://www.getrave.com/login/unh
[20] Knack Peer Tutoring, https://app.joinknack.com/school/university-of-new-hampshire-main-campus

5 Semester Schedule: PHYS 401 Introduction to Physics I[21]

Week	Date	Day	HW due	RQ due	Exams	Chapter
1	25-Aug	Mon				1. Representing Motion
	27-Aug	Wed	Intro to MP	Ch 1		
2	1-Sep	Mon				UNHM CLOSED
	3-Sep	Wed	Phys Primer Ch 1	Ch 2		2. Motion in One Dimension
3	8-Sep	Mon	Ch 2	Ch 3		3. Vectors and Motion in Two Dimensions
	10-Sep	Wed				
4	15-Sep	Mon	Ch 3	Ch 4		4. Forces and Newton's Laws of Motion
	17-Sep	Wed				
5	22-Sep	Mon	Ch 4	Ch 5		5. Applying Newton's Laws
	24-Sep	Wed				
6	29-Sep	Mon	Ch 5			
	1-Oct	Wed			**Exam 1 (Ch 1-5)**	
7	6-Oct	Mon		Ch 6		6. Circular Motion, Orbits, and Gravity
	8-Oct	Wed				
8	13-Oct	Mon	Ch 6			UNHM CLOSED
	15-Oct	Wed				
9	20-Oct	Mon		Ch 7		7. Rotational Motion
	22-Oct	Wed				
10	27-Oct	Mon	Ch 7	Ch 8		8. Equilibrium and Elasticity
	29-Oct	Wed				
11	3-Nov	Mon	Ch 8	Ch 9		9. Momentum
	5-Nov	Wed				
12	10-Nov	Mon	Ch 9	Ch 10		10. Energy and Work
	12-Nov	Wed				
13	17-Nov	Mon	Ch 10			
	19-Nov	Wed			**Exam 2 (Ch 6-10)**	
14	24-Nov	Mon		Ch 13		13. Fluids
	26-Nov	Wed				UNHM CLOSED
15	1-Dec	Mon	Ch 13			13. Fluids
	3-Dec	Wed				
16	8-Dec	Mon				REVIEW
	10-Dec	Wed			**Final exam TBA (cumulative)**	FINAL EXAMS

[21] This schedule is subject to reasonable modification by the instructor in response to the needs of the class. Changes will be communicated in a timely manner.