

COURSE INFORMATION - SYLLABUS

PHYS:1511 Spring 2025
College Physics I

- Instructor:** Y. Onel (yasar-onel@uiowa.edu)
153 VAN; 335-1853
- Office Hours:** 1:30 - 4:30 p.m. Wednesday
Students may confer with the instructor at other times only after making an appointment at the lecture.
TA office hour information is announced through ICON.
- Lecture:** 9:30 a.m. - 10:20 a.m. MWF; Lecture Room 2, VAN
- DEO:** Mary Hall Reno; Professor & DEO; mary-hall-reno@uiowa.edu
- Textbook:** Physics, 12th edition, Cutnell & Johnson. Access to the textbook is available under the Wiley Course Resources tab in ICON. **Please watch this video for the registration procedure: <https://bcove.video/3vQkh0A>. You should not pay during the registration, as it is covered by the university.**
My lecture notes are essential. You can use the textbook for your supplementary reading and homework.
- Homework:** Weekly homework is posted through the Assignment tab. You will have at least a week for each homework. Please start early and do not leave it to the last day. **Late homework will NOT be accepted.**
- Lab Manual:** Experiments in Mechanics, Wave Motion & Heat, ISBN: 9781792410956, Author: University of Iowa, Publisher: Kendall Hunt Publishing Company.
- Registration:** Changes in course registration including adding, dropping, and changes in sections, will be made in Room 203 VAN between the hours of 8-12 and 1-5 Mon-Fri.
- Course Description:** This course is intended for pre-medical, pre-dental, and other students who desire an algebra-based physics course (without calculus). Motion, mechanics, fluid motion, heat thermodynamics, waves and sound are covered. Numerical examples and lab experiments are chosen to illustrate basic physical principles. Course grades are based on mid-term exams, a final exam, lab performance, and class participation. Each week three lectures are given by the course instructor and one three-hour lab is conducted by a teaching assistant. The Discussion Section is a problem solving session conducted by a teaching assistant in person. Graduate teaching assistants will also provide discussion times to assist with problem solving. This course will meet in person (lecture, lab, and discussion).
- Laboratory:** The labs will be held under the supervision of your TA, who will grade your laboratory reports. Discuss the grading of your assignments with your TA.
- Discussion Sessions:** The discussion sessions will be conducted under the supervision of a TA. **"Check Your Understanding"** questions in the textbook is not relevant. We suggest you come to lectures and discussion sessions.

Exams: **The three exams and the final exam will be closed book.** The final exam is comprehensive. The date of the final exam will be announced on the course ICON page.

Exams will be taken in regular class time in Lecture room 2 VAN

Exam I: February 26

Exam II: March 26

Exam III: May 2

Course Grade:

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|-------------|---------|
| Exams: | 3 × 15% |
| Final Exam: | 25% |
| Labs: | 15% |
| Homework: | 15% |

Scale for letter grades:

Please check the U. Iowa proposed grading from this link:

<https://clas.uiowa.edu/faculty/grades-undergraduate-policies-and-guidelines>

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|-----------|-----------------------------|
| A+, A, A- | Over 85 points |
| B+, B, B- | Between 75 and 84.99 Points |
| C+, C, C- | Between 65 and 74.99 Points |
| D+, D, D- | Between 55 and 64.99 Points |
| F | Less than 55 points |

- This scale is expected to result in a grade distribution similar to the recommendation of the College of Liberal Arts and Sciences for introductory courses.
- Calculate your current grade in the course, using the information above
- Example:
 - Assume that your cumulative average scores are 70% for midterm exams (from the ICON gradebook), 80% for homework (ICON gradebook), 90% from labs (ICON LAB section Gradebook), and 65 from your Final Exam (ICON Gradebook).
 - numerical grade = $(0.45 \times 70) + (0.15 \times 80) + (0.15 \times 90) + (0.25 \times 75) = 75.75/100$
 - this is a B, based on the table above.

Tutoring:

TAs will be available for free tutoring in room 652 VAN during the hours posted (we expect on-line tutoring). Students are permitted to seek help from classmates in preparing their homework. While you are encouraged to seek help from TAs, do not expect them to do your homework for you.

Writing Service:

For services and programs please see: writingcenter.uiowa.edu

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| Posting of solutions: | Homework solutions will be available on icon, a week after the assignment. |
| When to seek help from the instructor (office hours): | <p>Homework: when you don't understand a solution that has been put on reserve.</p> <p>Exams: Questions about grading (it is not encouraged that this practice become a habit).</p> <p>Understanding of physical concepts, lecture topics, and textbook topics. Students visiting for these purposes will be most appreciated.</p> <p>Feedback on your TA's performance.</p> |
| Occasions to seek help from your section TA (instead of the instructor): | <p>Homework: Questions about solutions to the problems, lecture, and textbook topics.</p> <p>Laboratories: All questions</p> |
| Course ICON site: | Homework assignments will be shown on the course ICON. The solutions to the homework problems and exams as well as other posted materials will be on the ICON site. |

| COURSE CONTENTS (Tentative) | |
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| Chapter 1 | Introduction |
| Chapter 2 | Kinematics in One Dimension |
| Chapter 3 | Kinematics in Two Dimensions |
| Chapter 4 | Forces & Newton's Law of Motion |
| Chapter 5 | Dynamics of Uniform Circular Motion |
| Chapter 6 | Work and Energy |
| Chapter 7 | Impulse and Momentum |
| Chapter 8 | Rotational Kinematics |
| Chapter 9 | Rotational Dynamics |
| Chapter 10 | Simple Harmonic Motion |
| Chapter 11 | Fluids |
| Chapter 12 | Temperature and Heat |
| Chapter 13 | The Transfer of Heat |
| Chapter 14 | The Ideal Gas Law and Kinematic Theory |
| Chapter 15 | Thermodynamics |
| Chapter 16 | Waves |

| Laboratory Schedule | |
|----------------------------|---|
| Week of | Experiment |
| January 20 | NO LAB |
| January 27 | NO LAB |
| February 3 | M1 - Introduction to Laboratory Measurements |
| February 10 | M2 - Kinematics with Constant Acceleration |
| February 17 | M3 - Projectile Motion |
| February 24 | Exam I - NO LAB |
| March 3 | M4 - Acceleration, Force, and Newton's Second Law |
| March 10 | M5 - Conversion and Conservation of Energy |
| March 17 | M6 - Collisions in Two Dimension |
| March 24 | SPRING BREAK - NO LAB |
| March 31 | Exam II - NO LAB |
| April 7 | M7 - Moment of Inertia |
| April 14 | M8: Conservation of Angular Momentum |
| April 21 | M9 - Simple Harmonic Motion |
| April 28 | H3 - Specific Heat |
| May 5 | Exam III - NO LAB |

UI and the College of Liberal Arts and Sciences INFORMATION FOR UNDERGRADUATES

Attendance and Classroom Expectations

Students are responsible for attending class and for knowing an instructor's attendance policies, which vary by course and content area. All students are expected to attend class and to contribute to its learning environment in part by complying with university policies and directives regarding appropriate classroom behavior or other matters.

Absences

Students are responsible for communicating with instructors as soon they know that an absence might occur or as soon as possible in the case of an illness or an unavoidable circumstance. Students can use the CLAS absence form to help communicate with instructors who will decide if the absence is excused or unexcused; the form is located on ICON within the top banner under "Student Tools." Delays by students in communication with an instructor could result in a forfeit of what otherwise might be an excused absence (<https://clas.uiowa.edu/students/handbook/attendance-absences>).

Absences: Illness, Unavoidable Circumstances, and University Sponsored Activities

Students who are ill, in an unavoidable circumstance affecting academic work, or who miss class because of a university sponsored activity are allowed by UI policy to make up a missed exam. Documentation is required by the instructor except in the case of a brief illness. Students are responsible for communicating with instructors as soon as the absence is known (<https://opsmanual.uiowa.edu/students/absences-class#8.1>).

Absences: Holy Days

The University is prepared to make reasonable accommodations for students whose religious holy days coincide with their classroom assignments, test schedules, and classroom attendance expectations. Students must notify their instructors in writing of any such Religious Holy Day conflicts or absences within the first few days of the semester or session, and no later than the third week of the semester. If the conflict or absence will occur within the first three weeks of the semester, the student should notify the instructor as soon as possible. See [Operations Manual 8.2 Absences for Religious Holy Days](#) for additional information.

Absences: Military Service Obligations

Students absent from class due to U.S. veteran or U.S. military service obligations (including military service-related medical appointments, military orders, and National Guard Service obligations) must be excused without penalty. Instructors must make reasonable accommodations to allow students to make-up exams or other work. Students must communicate with their instructors about the expected possibility of missing class as soon as possible.

(For more information, see <https://opsmanual.uiowa.edu/iv-8-absences-class%C2%A0-0>).

Academic Misconduct

All undergraduates enrolled in courses offered by CLAS have, in essence, agreed to the College's [Code of Academic Honesty](#). Academic misconduct affects a student's grade and is reported to the College which applies an additional sanction, such as suspension. Outcomes about misconduct are communicated through UI email (<https://clas.uiowa.edu/students/handbook/academic-fraud-honor-code>).

Academic Accommodations for Students with Disabilities

The University is committed to providing an educational experience that is accessible to all students. If a student has a diagnosed disability or other disabling condition that may impact the student's ability to complete the course requirements as stated in the syllabus, the student may seek accommodations through [Student Disability Services](#) (SDS). SDS is responsible for making Letters of Accommodation (LOA) available to the student. The student must provide a LOA to the instructor as early in the semester as possible, but requests not made at least two weeks prior to the scheduled activity for which an accommodation is sought may not be accommodated. The LOA will specify what reasonable course accommodations the student is eligible for and those the instructor should provide. Note that accommodations are not granted retroactively but from the time of the student's request to the instructor onward. Additional information can be found on the [SDS website](#).

Administrative Home of the Course

The College of Liberal Arts and Sciences (CLAS) is the home of this course, and CLAS governs the course's add and drop deadlines, the "second-grade only" option (SGO), and other undergraduate policies and procedures. Different UI colleges may have other policies or deadlines. See <https://clas.uiowa.edu/students/handbook>. Questions? Contact CLAS at clasps@uiowa.edu or 319-335-2633.

Class Behavioral Expectations

Students are expected to comply with university policies regarding appropriate classroom behavior as outlined in the [Code of Student Life](#). This includes the policies and procedures that all students have agreed to regarding the Steps Forward for Spring 2022 in response to the COVID-19 pandemic. Particularly, all students are required to wear a face covering when in a UI building, including a classroom. In addition, the density of seats in classrooms has been reduced; in some instances, this will allow 6 feet or more between students while other cases, it may be less. Regardless, wearing a face covering and maintaining as much distance as possible are vital to slowing the spread of COVID-19. In the event that a student disrupts the classroom environment through their failure to comply with the reasonable directive of an instructor or the University, the instructor has the authority to ask that the student immediately leave the space for the remainder of the class period. Additionally, the instructor is asked to report the incident to the [Office of Student Accountability](#) for the possibility of additional follow-up. Students who need a temporary alternative learning arrangement related to COVID-19 expectations should contact [Student Disability Services arrangements/](#); +1 319335-1462.

Class Recordings: Privacy and Sharing

Course lectures and discussions are sometimes recorded or live-streamed. These are only available to students registered for the course and the intellectual property of the faculty member. These materials may not be shared or reproduced without the explicit written consent of the instructors. Students may not share these recordings with those who are not enrolled in the course; likewise, students may not upload recordings to any other online environment. Doing so is a breach of the Code of Student Conduct and could be a violation of the Federal Education Rights and Privacy Act (FERPA); also see <https://dos.uiowa.edu/policies/code-of-student-life/>.

Communication: UI Email

Students are responsible for all official correspondences sent to their UI email address (uiowa.edu) and must use this address for any communication with instructors or staff in the UI community ([Operations Manual, III.15.2](#)). Emails should be respectful and brief, with complex matters addressed during the instructor's drop-in hours, for example. Faculty are not expected to answer email after business hours or during the weekends.

Complaints About Academic Matters

Students with a complaint about an academic issue should first visit with the instructor or course supervisor and then with the Chair of the department or program offering the course; students may next bring the issue to the College of Liberal Arts and Sciences; see this page for more information: <https://clas.uiowa.edu/students/handbook/student-rights-responsibilities>.

Final Examination Policies

The final exam schedule is published during the fifth week of the fall and spring semesters or on the first day of summer classes; *students are responsible for knowing the date, time, and place of their final exams*. Students should not make travel plans until knowing this information. A student with exams scheduled on the same day and time or who have more than two final exams on the same day should visit this page for how to resolve these problems by the given deadline: <https://registrar.uiowa.edu/makeup-final-examination-policies>. No exams may be scheduled the week before finals; some exception, however, have been made for labs, language courses, and off-cycle courses (<https://registrar.uiowa.edu/final-examination-scheduling-policies>).

Free Speech and Expression

The University of Iowa supports and upholds the First Amendment protection of freedom of speech and the principles of academic and artistic freedom. We are committed to open inquiry, vigorous debate, and creative expression inside and outside of the classroom. Visit Free Speech at Iowa for more information on the University's policies on free speech and academic freedom (<https://freespeech.uiowa.edu/>).

Mental Health

Students are encouraged to be mindful of their mental health and seek help as a preventive measure or if feeling overwhelmed and/or struggling to meet course expectations. Students are encouraged to talk to their instructor for assistance with specific class-related concerns. For additional support and counseling, students are encouraged to contact University Counseling Service (UCS). Information about UCS, including resources and how to schedule an appointment, can be found at counseling.uiowa.edu. Find out more about UI mental health services at: mentalhealth.uiowa.edu. Student Health can also address related concerns (<https://studenthealth.uiowa.edu/>). These visits are free to students. After hours, students are encouraged to call the Johnson County Community Crisis Line at (319) 351-0140 or dial 911 in an emergency.

Non-discrimination statement

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact the Director, [Office of Institutional Equity](#), the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oiie-ui@uiowa.edu. Students may share their pronouns and chosen/preferred names in [MyUI](#), which is accessible to instructors and advisors.

Sexual Harassment

Sexual harassment subverts the mission of the University and threatens the well-being of students,

faculty, and staff. All members of the UI community must uphold the UI mission and contribute to a safe environment that enhances learning. Incidents of sexual harassment must be reported immediately. For assistance, please see <https://osmrc.uiowa.edu/>.

GE Natural Science Learning Objectives

Students will come to understand a significant segment of natural science and will become familiar with its major concepts and ways of framing questions. Students will understand and appreciate (if not adopt) the attitudes of science: logic, precision, experimentation, tentativeness, and objectivity. Students will develop and practice those communication skills that apply to the relevant discipline. In laboratory courses, students will use laboratory investigations and appropriate procedures to generate accurate and meaningful data and derive reasonable conclusions from them.