

# Physics 11B, Elementary Physics (4 credits)

UVM Physics Department - Fall 2022

## **Class schedule:**

Lecture: MWF 9:40-10:30 AND T 10:05-11:20 in Innovation E330

Three evening exams: W 6:40 Marsh Life Science 235: Sept. 28, Oct. 19, Nov. 9

*(Note, this class meets four days a week. There is a separate one credit lab, Physics 21. If you need lab credit, please enroll in a section of Physics 21 as well.)*

## **Instructor:** Dr. Luke Donforth (he/him)

Office Hours: MW 2:30 – 3:30 or by appointment

Office: Innovation E227

Email: [luke.donforth@uvm.edu](mailto:luke.donforth@uvm.edu) (I will respond, but not on evenings or weekends.)

Phone: 802-656-0052 (landline, no text)

*Please utilize office hours for help and/or to discuss interesting aspects of the physics we're studying. Answering questions about material is easiest in person. If you have questions about grading, please email so that we both have a record of the conversation.*

**TAs:** there are multiple TAs for the course and the different sections, and you can go to any TA office hours. Please check the course Blackboard page for information about TA office hours.

**Mastering Physics ID:** donforth87156

**Pre-requisites:** Algebra and Trigonometry

**Education requirements satisfied:** Submitted for, but pending approval: N1, QR

## **Course Description:**

Physics, at its heart, is a set of tools to help you analyze and understand the universe around you, from subatomic particles to galactic structures. Physics 11 is a small step on that path, as a first semester introductory algebra based college physics course. Students will be presented with the topics of linear and rotational motion, kinematic, momentum, and energy; as well as conservation laws and oscillations. The course goals are for students to develop both a qualitative (conceptual) and quantitative (algebra based problem-solving) understanding of each of these topics.

This course will meet for three 50-minute classes per week on Mondays, Wednesdays, Fridays and one 75-minute meeting on Tuesdays. This course is run as a student and group-centered active learning format where students will be expected to prepare for each class period by reading assigned sections from the textbook and other pre-class activities. During class, students will work individually and in groups doing a variety of activities including practice problems, tutorials, and other hands-on exercises with guidance and assistance from the instructor and teaching assistants.

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## Required Course Materials:

Author(s): Knight, Jones, Field

## Grading Criteria & Policies:

Each student will receive a total grade based on the grades of the exams, homework, pre-lecture, and in-class assignments. The individual components will be scaled and converted to letter grades according to:

Mid-terms 33% (11% each)  
Pre-lectures: 9%  
In-class (Learning Catalytics): 26%  
Homework 16%  
Final: 16%

90% A- < 93% A < 97% A+ 100%  
80% B- < 83% B < 87% B+ < 90%  
70% C- < 73% C < 77% C+ < 80%  
60% D- < ^3% D < 67% D+ < 70%  
F < 60%

All grades will be posted on Blackboard to ensure privacy. It is each student's responsibility to verify the accuracy of the postings. Please report any discrepancies promptly.

**Missing Hourly Exams:** Missing a midterm exam will result in a score of zero unless the student has a valid excuse (and accompanying note from physician, dean, etc.). A student with a valid excuse may be given a make-up exam at a time that is mutually convenient for the student and the instructor.

**Missing the Final:** Missing the final examination will result in a final course grade of F unless the student has arranged with the instructor through the appropriate academic dean for an "Incomplete."

**Extra Credit:** Extra credit work will not be assigned for the course.

### Exam schedule

Midterms are Wednesday evening in Marsh Life Science 235, at 6:40 pm.

Midterm 1: September 28<sup>th</sup>: chapters 1-5

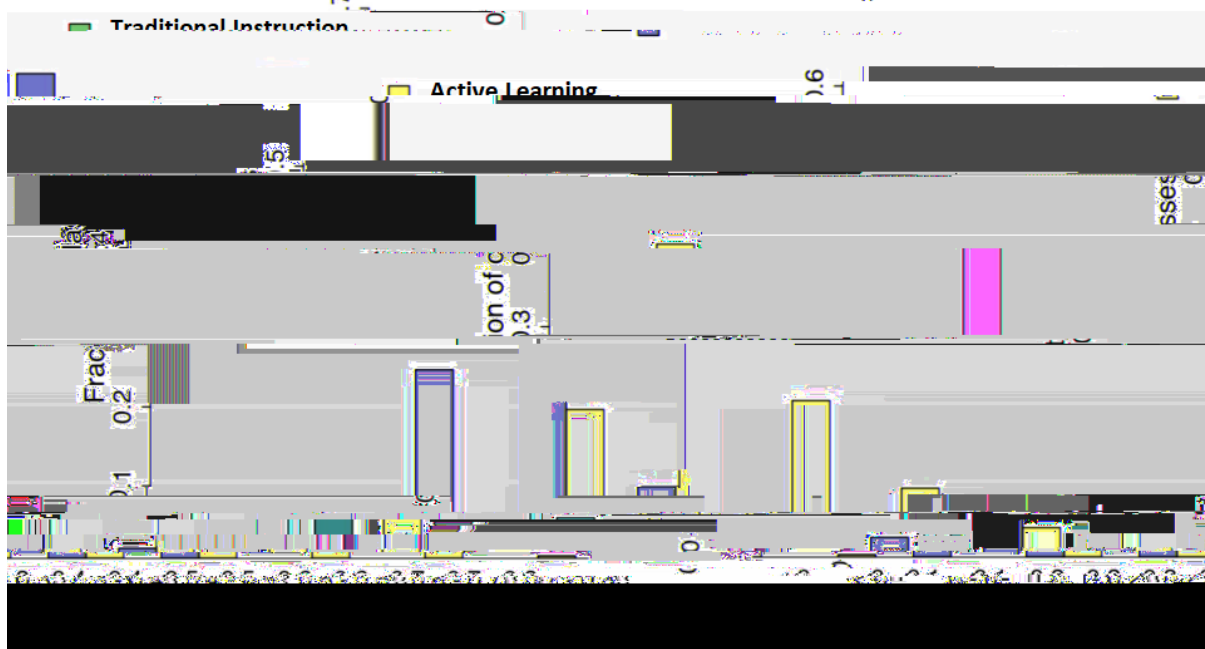
Midterm 2: October 19<sup>th</sup>: chapters 6-9

Midterm 3: November 9<sup>th</sup>: chapters 10-12

Final: Friday, December 16, 7:30 am in ML SCI 235, cumulative (chapters 1 through 16).



## Normalized Learning Outcomes



During the daily sessions, we'll cover material in discussion, group problem-solving, conceptual analysis, and lecture. A portion of your final grade is contingent on your participation in these sessions. You should read the pertinent sections of the textbook before coming to class, to be well prepared to participate in the discussions and problem solving. We will work together to develop a learning community that is inclusive and respectful; and that encourages and appreciates expressions of different ideas, opinions, and beliefs in the spirit of Our Common Ground. Meaningful and constructive dialogue is encouraged in this class. This requires mutual respect, willingness to listen, and open-mindedness to opposing points of view. Respect for individual differences and alternative viewpoints will be maintained at all times in this class. Conduct that substantially or repeatedly disrupts the ability of faculty and instructors to teach and the ability of students to engage may result in my asking a student to temporarily leave the classroom. [See Undergraduate Catalogue - Classroom Code of Conduct \(p. 443-444\).](#)

The UVM attendance policy can be found [here](#).

Our intention is for CEMS to be a place where you will be treated with respect and kindness. We welcome individuals of all ages, backgrounds, beliefs, interests, ethnicities, genders, gender identities, gender expressions, national origins, religious affiliations, sexual orientations, ability – and other visible and nonvisible differences. All members of the College are expected to contribute to a respectful, welcoming and inclusive environment for every other member of the community. If you ever feel that you have been unfairly treated or judged by an instructor, a mentor, another student, or another member of the CEMS community, please let someone know. Your instructors and advisors in the [CEMS Office of Student Services](#) are available to discuss any concerns or you can report an incident of bias through the [Campus Bias Response Program](#).

## Attendance and illness:

If a student will not be able to attend in-person classes for qualifying health reasons, Student Health Services (SHS) will send a notification to the appropriate student services office or designated staff member informing them of this along with the dates the student is unable to attend. The SHS notification will specify whether the request for flexibility is only around in-person class attendance or includes additional flexibility for assignments and tests because the student is too ill to participate. Students are responsible for working with their faculty to make up class content and work they miss due to a documented illness.

## Lived Name and Pronoun Information

The UVM Directory includes fields for indicating your lived name and your pronouns. Lived names (preferred names, names in use) are names that an individual wants to be known by in the University community. Entering your pronouns is strongly encouraged to help create a more inclusive and respectful campus community. To update your information, login to the UVM Directory. A preview box will allow you to see how this information will appear in other systems used on campus such as Microsoft Teams and Blackboard.

More information about how to make changes to your lived name and pronouns is available in the [Knowledge Base](#).

To read more about official UVM policies, events, and initiatives regarding diversity, equity, and inclusion: <https://www.uvm.edu/diversity>

## Sexual Assault, Relationship Violence, Harassment, & Discrimination Disclosure:

All course instructors (including graduate and undergraduate students hired for the course) are “Responsible Employees” or mandatory reporters, meaning we are responsible for reporting to the Title IX Coordinator instances of sexual assault, intimate partner violence, harassment, and discrimination disclosed to any of us, including the names of the person that disclose the information, for institutional review. If you would like to speak confidentially with someone (i.e. someone not required to make a report for institutional review) you may contact the following resources directly for support:

[Campus Victim's Advocacy](#)

[HOPE Works](#)

[UVM Counseling & Psychiatry Services](#)

[Student Health Center](#)

[UVM's Affirmative Action and Equal Opportunity Office](#)

## Course Evaluation:

All students are expected to complete a **mid-term** evaluation and final evaluation of each course they are enrolled in. Indicate that the evaluations will be anonymous and confidential, and that the information gained, including constructive criticisms, will be used to improve the course.

[Click here for instructions on how to access Blue course evaluations.](#)

## Student Learning Accommodations:

In keeping with University policy, any student with a documented disability interested in utilizing ADA accommodations should contact Student Accessibility Services (SAS), the office of Disability Services on campus for students. SAS works with students and faculty in an interactive process to explore reasonable and appropriate accommodations, which are communicated to faculty in an accommodation letter. All students are strongly recommended to discuss with their faculty the accommodations they plan to use in each course. Faculty who receive Letters of Accommodation with Disability Related Flexible accommodations will need to fill out the Disability Related Flexibility Agreement. Any questions from faculty or students on the agreement should be directed to the SAS specialist who is indicated on the letter.

### Contact SAS:

A170 Living/Learning Center;

802-656-7753

[access@uvm.edu](mailto:access@uvm.edu)

[www.uvm.edu/access](http://www.uvm.edu/access)

## Research and Citation Help

For help selecting research topics, finding information, citing sources, and more, ask a librarian. The UVM Libraries are eager to help. You may ask questions by phone, e-mail, chat, or text, or make an appointment for an individual consultation with a librarian.

Howe Library: <https://library.uvm.edu/askhowe>

Dana Medical Library: <https://dana.uvm.edu/help/ask>

Silver Special Collections Library: <https://specialcollections.uvm.edu/help/ask>





The University [final exam policy](#) outlines expectations during final exams and explains timing and process of examination period.

### **Grade Appeals:**

If you would like to contest a grade, please follow the procedures [outlined in this policy](#).

### **Grading:**

[This link](#) offers information on grading and GPA calculation.

### **Religious Holidays:**

Students have the right to practice the religion of their choice. If you need to miss class to observe a religious holiday, please submit the dates of your absence to me in writing by the end of the second full week of classes. You will be permitted to make up work within a mutually agreed-upon time. The complete policy is [here](#).

### **Promoting Health & Safety:**

The University of Vermont's number one priority is to support a healthy and safe community:

[Center for Health and Wellbeing](#)

[Counseling & Psychiatry Services \(CAPS\)](#) Direct Phone Line: (802) 656-3340

**C.A.R.E.** If you are concerned about a UVM community member or are concerned about a specific event, we encourage you to contact the Dean of Students Office (802-656-3380). If you would like to remain anonymous, you can report your concerns online by [visiting the C.A.R.E. Team website](#).

### **Food Insecurity:**

The UVM Center for Health & Wellbeing provides several on- and off-campus resources for students struggling with food insecurity: <https://www.uvm.edu/health/food-insecurity-uv>

## Statement on Alcohol and Cannabis in the Academic Environment

As a faculty member, I want you to get the most you can out of this course. You play a crucial role in your education and in your readiness to learn and fully engage with the course material. It is important to note that alcohol and cannabis have no place in an academic environment. They can seriously impair your ability to learn and retain information not only in the moment you may be using, but up to 48 hours or more afterwards. In addition, alcohol and cannabis can:

- Cause issues with attention, memory and concentration
- Negatively impact the quality of how information is processed and ultimately stored
- Affect sleep patterns, which interferes with long-term memory formation

## Course Assignments, Tests, and Due Dates

This is the initial schedule of course assignments and due dates. They may need to change, in which case the information will be posted on the course webpage.

Please see Mastering Physics for the specific problems on each homework and practice.

	Assignment	Type	Date
3	Introduction to MasteringPhgPTj1.6 (g)1 (e)aw.		4

Pre-lecture Chapter 07  
Optional Video Lecture - Chapter 07  
Practice - Chapter 06  
Homework Quiz Chapter 06  
Pre-lecture Chapter 08  
Optional Video Lecture - Chapter 08

Prelectures	09/29/22 at 11:59pm
Practice	
Practice	
Homework	10/02/22 at 11:59pm
Prelectures	10/03/22 at 11:59pm