



## PHYS 2425.01E, University Physics I

### COURSE SYLLABUS: Fall 2025

#### INSTRUCTOR INFORMATION

**Instructor:** Dr. Blake Head

**Office Location:** STC 340

**Office Hours:** TBA

**Office Phone:** 903.886.5359

**Class Time:** MWF, 12:00am - 1:50pm: STC 135

**University Email Address:** thomas.head@etamu.edu

**Preferred Form of Communication:** Office Hours or E-mail! Or just chat with me after class.

**Communication Response Time:** I will do my best to respond to your e-mails as soon as possible, definitely within 24 hours.

**Learning Assistants:** Logan Curtiss & Tristan Howell

**Graduate Assistant:** TBA

#### COURSE INFORMATION

##### Materials – Textbooks, Readings, Supplementary Readings

A free textbook: W. Moebis, S.J. Ling, and J. Sanny, *University Physics Volume 1*, Open Stax, Available freely online at <https://openstax.org/details/books/university-physics-volume-1>

A free nontraditional textbook: S.A. Hill, *How Things Move, Why Things Move*, Available freely online at <http://howwhy.sahill.us/>

In lieu of a course packet or lab manual, all class activities are digital and can be found in D2L or linked in D2L. Many activities are in the form of Google Docs. You should be able to work off of a laptop/tablet/etc. during class (class laptops are available).

***However, sometimes the internet in our classroom is not great, so you might want to download or print activities before class.***

*The syllabus/schedule are subject to change.*

## Course Description

This is a calculus-based introductory physics course in mechanics. Topics include momentum, dynamics, energy, and kinematics.

## University Catalog Description

Calculus based physics course in mechanics for science, mathematics and engineering students. Prerequisites: You must be currently enrolled in Calculus I or have previously taken Calculus I.

## Student Learning Outcomes

1. Students will be able use momentum to describe a physical situation and calculate the motion of an object using these quantities.
2. Students will be able to represent the forces on an object in a physical situation and calculate the resulting motion using Newton's Laws.
3. Students will be able use energy to describe a physical situation and calculate the motion of an object using these quantities.
4. Students will be able to precisely explain and calculate motion using the concepts of position, velocity, and acceleration

## COURSE REQUIREMENTS

### Minimal Technical Skills Needed

Students should be able to use D2L (myLeo Online), view videos on YouTube, use a calculator, use Excel and/or a graphing calculator or app, convert work to a pdf, take screenshots, use a variety of online communication methods such as Zoom, Discord, D2L, and email.

### Instructional Methods

This course is taught in '*studio mode*'. Studio mode is a student centered active learning environment that concentrates on group work. When learning how to do something, there is no better teacher than experience and practice. In order to learn physics, you will be actively doing physics every day.

Activities will be completed in groups of 3-4, assigned by the instructor. These groups will change 2-3 times throughout the semester. During class, you and your group will work through labs, conceptual work, and solve problems together. Meanwhile, the instructor, learning assistants, and graduate assistant will visit each table to listen in on your discussion, observe your problem solving process, ask / answer questions, and generally poke at you to gauge what things make sense and what things don't. Our goal is to make it so you are able to ask the right kind of questions that allow you to solve problems yourself. Our goal is NOT to give you the answers.

Research in physics education has shown that students learn best when they are actively engaged in class. Studio mode has been implemented at many universities

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and has been found to have positive impacts on conceptual understanding and problem-solving ability.

## **Student Responsibilities or Tips for Success in the Course**

The vast majority of class time will be spent working in groups. Students are expected to participate fully in group-work in their assigned roles. Students are expected to have completed any assigned reading / watch assigned videos by the due date. Students are expected to take notes on all problems you solve in class, any notes shared by other groups on whiteboards. For work displayed on whiteboards, the easiest thing to do is to just take photos of the work using camera phones. All students are expected to complete the tutorial worksheets.

## **GRADING**

Assignments will be graded out of 10 points. In addition, you will see associated learning outcomes on each homework assignment. These represent the grading rubric more or less, and are also there to guide along the process.

Myself or the GAT will provide feedback on each of your assignments. Using this feedback, you will have the opportunity to revise your work and resubmit. Remember, college is about **learning**, so as long as you are making the effort to learn, that is what is most important!

Your grade will be entirely be determined by **Individual Assignments**, **Group Assignments**, and **WrapUp** Assignments. The weights of each assignment type are given below:

Individual Assignments -	60%
Group Assignments -	10%
WrapUp Assignments -	30%
<b>Total -</b>	<b>100%</b>

A brief description of each assignment type is given below:

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## Individual Assignments

These assignments are to be completed individually by the student outside of class. With few exceptions, these are assigned after each class, and will be due the following class period. Once graded, you may address any feedback you've received on these assignments, and re-submit to earn any missed points. Revisions must be checked in person by an LA, GA, or the professor.

On each *Individual Assignment*, you will receive 1 of 3 marks:

Label	What it means
Accepted	This work is completed for the most part correctly. Any errors are fairly minor. You are done!
Revise	You have attempted the work, but there are some things you need to work on learning better. You should revise your assignment.
No credit	You either submitted nothing, accidentally submitted the wrong assignment, or submitted work that is barely started.

**You should expect most of your assignments first attempts to be marked Revise.**

This is not a bad thing and you should not feel discouraged! In a real job (even mine!) things nearly always need to be revised once or twice. My goal is to have you learn this stuff, so I will hold you to a high standard to support that learning process.

If your work comes back Revise, that means you have one week to revise it if you choose. You have *unlimited* revision attempts, but you always need to complete your next revision within 1 week of when I last sent you feedback. Any submissions after this week will not be accepted and your grade will be locked in.

- You must complete your revisions individually because these are how I see how much you can do on your own.
- You must include in your revision what you went back and changed / fixed, and provide some explanation of why it is important.
- The revised portion should be \*visually distinct\* from your original submission so I know what to look at
- You must have revisions checked in person by someone.

You **MUST** turn your work in on time. I don't accept late work outside of extenuating circumstances! It is okay, however, if your first attempt simply says something like, "I think this has something to do with X, but I feel really lost." That will allow you to submit revisions. There must be evidence that you made a legitimate attempt!

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## Group Assignments

During class, students will work on a variety of assignments together in groups. When completed, these assignments must be uploaded to the course shell under the relevant heading. Group members may all upload the same image of their group work, but each student must make their own submission. These are primarily graded on completion as it is expected that you will make lots of mistakes here.

## WrapUp Assignments

These take the place of a traditional exam. WrapUp assignments will typically be given at the end of each major section of the course. These will be open-ended questions designed for you to explain everything you have learned in that section.

## Attendance Policy

This course is a studio-mode active learning classroom. This requires that students are present and actively participating in **all** lessons. If students fail to show up, then we create a situation where no group work can happen, defeating the entire purpose of the class. For this reason, this course has a strict attendance policy.

Student have a maximum of 3 unexcused absences. After this, each additional unexcused absence will result in your maximum possible grade in this course being reduced by 5 points (one half of a letter grade). We will be taking attendance each day at the start of class. If you are significantly late, it is the student's responsibility to meet with an instructor to be marked present for that day.

If you let someone know you will be missing class beforehand, that absence will be considered excused. Additional proof may be requested if necessary.

## TECHNOLOGY REQUIREMENTS

### LMS

All course sections offered by East Texas A&M University have a corresponding course shell in the myLeo Online Learning Management System (LMS). Below are technical requirements

LMS Requirements:

<https://community.brightspace.com/s/article/Brightspace-Platform-Requirements>

LMS Browser Support:

[https://documentation.brightspace.com/EN/brightspace/requirements/all/browser\\_support.htm](https://documentation.brightspace.com/EN/brightspace/requirements/all/browser_support.htm)

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## **ACCESS AND NAVIGATION**

You will need your campus-wide ID (CWID) and password to log into the course. If you do not know your CWID or have forgotten your password, contact the Center for IT Excellence (CITE) at 903.468.6000 or [helpdesk@etamu.edu](mailto:helpdesk@etamu.edu)

**Note:** Personal computer and internet connection problems do not excuse the requirement to complete all course work in a timely and satisfactory manner. Each student needs to have a backup method to deal with these inevitable problems. These methods might include the availability of a backup PC at home or work, the temporary use of a computer at a friend's home, the local library, office service companies, Starbucks, a ETAMU campus open computer lab, etc.

## **COMMUNICATION AND SUPPORT**

If you have any questions or are having difficulties with the course material, please contact your instructor.

### **Technical Support**

If you are having technical difficulty with any part of Brightspace, please contact Brightspace Technical Support at 1-877-325-7778. Other support options can be found here:

<https://community.brightspace.com/support/s/contactsupport>

## **COURSE AND UNIVERSITY PROCEDURES/POLICIES**

### **Course Specific Procedures/Policies**

#### **Syllabus Change Policy**

The syllabus is a guide. Circumstances and events, such as student progress, may make it necessary for the instructor to modify the syllabus during the semester. Any changes made to the syllabus will be announced in advance.

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## **University Specific Procedures**

### **Student Conduct**

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. The Code of Student Conduct is described in detail in the Student Guidebook.

<https://inside.etamu.edu/admissions/onestopshop/undergraduateAdmissions/studentGuidebook.aspx>

Students should also consult the Rules of Netiquette for more information regarding how to interact with students in an online forum: <https://www.britannica.com/topic/netiquette>

### **ETAMU Attendance**

For more information about the attendance policy please visit the [Attendance](#) webpage and [Procedures 13.99.99.R0.01](#)

<https://inside.etamu.edu/admissions/registrar/generalInformation/attendance.aspx>

### **Academic Integrity**

Students at East Texas A&M University are expected to maintain high standards of integrity and honesty in all of their scholastic work. For more details and the definition of academic dishonesty see the following procedures:

<https://inside.etamu.edu/aboutus/policiesproceduresstandardsstatements/rulesprocedures/13students/graduate/13.99.99.R0.10.pdf>

<https://inside.etamu.edu/academics/graduateSchool/faculty/GraduateStudentAcademicDishonestyForm.pdf>

### **Students with Disabilities-- ADA Statement**

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

#### **Office of Student Disability Resources and Services**

East Texas A&M University  
Velma K. Waters Library Rm 162  
Phone (903) 886-5150 or (903) 886-5835  
Fax (903) 468-8148  
Email: [studentdisabilityservices@etamu.edu](mailto:studentdisabilityservices@etamu.edu)

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Website: [Student Disability Services](#)

<https://www.etamu.edu/student-disability-services/>

### **Nondiscrimination Notice**

East Texas A&M University will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin, disability, age, genetic information or veteran status. Further, an environment free from discrimination on the basis of sexual orientation, gender identity, or gender expression will be maintained.

### **Campus Concealed Carry Statement**

Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in East Texas A&M University buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and ETAMU Rule 34.06.02.R1, license holders may not carry a concealed handgun in restricted locations.

For a list of locations, please refer to the [Carrying Concealed Handguns On Campus](#) document and/or consult your event organizer.

Web url: <http://www.etamu.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34SafetyOfEmployeesAndStudents/34.06.02.R1.pdf>

Pursuant to PC 46.035, the open carrying of handguns is prohibited on all ETAMU campuses. Report violations to the University Police Department at 903-886-5868 or 9-1-1.

### **East Texas A&M University Supports Students' Mental Health**

The Counseling Center at ETAMU, located in the Halladay Building, Room 203, offers counseling services, educational programming, and connection to community resources for students. Students have 24/7 access to the Counseling Center's crisis assessment services by calling 903-886-5145. For more information regarding Counseling Center events and confidential services, please visit [www.etamu.edu/counsel](http://www.etamu.edu/counsel)

### **Mental Health and Well-Being**

The university aims to provide students with essential knowledge and tools to understand and support mental health. As part of our commitment to your well-being, we offer access to Telus Health, a service available 24/7/365 via chat, phone, or webinar. Scan the QR code to download the app and explore the resources available to you for guidance and support whenever you need it.

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<http://telusproduction.com/app/5108.html>

## AI use policy

East Texas A&M University acknowledges that there are legitimate uses of Artificial Intelligence, ChatBots, or other software that has the capacity to generate text, or suggest replacements for text beyond individual words, as determined by the instructor of the course.

Any use of such software must be documented. Any undocumented use of such software constitutes an instance of academic dishonesty (plagiarism).

Individual instructors may disallow entirely the use of such software for individual assignments or for the entire course. Students should be aware of such requirements and follow their instructors' guidelines. If no instructions are provided the student should assume that the use of such software is disallowed.

In any case, students are fully responsible for the content of any assignment they submit, regardless of whether they used an AI, in any way. This specifically includes cases in which the AI plagiarized another text or misrepresented sources.

13.99.99.R0.03 Undergraduate Academic Dishonesty

13.99.99.R0.10 Graduate Student Academic Dishonesty

## COURSE OUTLINE / CALENDAR

Below is a tentative schedule for the material we will be covering this semester. This could change depending on pacing!!

### Content schedule

Weeks 1-2	Momentum and impulse
Weeks 3-8	Dynamics
Weeks 9-10	Work and Energy
Weeks 11-13	Kinematics
Weeks 14-15	Rotation
Week 16	Finals week

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