

**PHYS 201 College Physics Fall 2023 TR 5:30**

**Course Description:** Fundamentals of classical mechanics, heat and sound.

**Prerequisites:** High school algebra and trigonometry or the equivalent.

**Learning Outcomes:** Upon completion of PHYS 201 a student will understand the basic laws and concepts of physics in the following areas and will be able to apply them in problems relating to physical situations: mechanics, mechanical waves, and thermodynamics.

**Instructor:** Hans Schuessler **email:** h-schuessler@tamu.edu

**Office Hours:** TBD

**Grad. Assistant:** Carlos Rodriguez **email:** carlos.rodriguez@tamu.edu

**Text:** College Physics 11<sup>th</sup> ed by Young and Adams with Modified Mastering Physics

**The mid-term exams are in person 7:00 to 9:00 pm, on the following Thursdays:**

**September 14 (Chs 1-5), October 12 (Chs 6-8), November 2 (Chs 9-11), and November 30 (Chs 12-16)**

Access **Mastering Physics for homework and Webassign for lab**

There are prelecture videos and tutorial problems assigned in Mastering Physics (for grade) in addition to the problems from the textbook that are listed on the syllabus.

**Grading:** 4 exams 60%; Final (comprehensive) 20%; Lab 5%; Recitation 5%; Homework (Mastering Phys) 5%; in-class quizzes 5%.

Scale: 90-100 A, 80-89 B, 60-79 C, 45-59 D, <45 F. Grades may be curved upward. Follow university policy on making up missed work.

**You must achieve 70% or better in the laboratory in order to pass the course.**

If your grade on the Final Exam is higher than your lowest grade on one of the four exams during the semester, that lowest grade will be replaced by its average with the Final in computing the course grade. The quiz grade will come from 25 quizzes; if more quizzes than this are given during the semester the lowest grades beyond the best 25 will be dropped.

August 25 is last day for no record drop. Nov. 15 is the last day to Q-drop.

Final Exam is on Tuesday, December 12, 3:30 – 5:30 pm

Syllabus: (MC denotes multiple-choice problems)

Wk	Date	Topic	Sect. in Text	Homework problems
1	Aug. 22	Vectors; Vector Addition	1: 1-8	1: MC5,6,10; 1:P7,41,42,43,54
		Velocity	2:	2: MC3,11; P3,11,19,21
		Acceleration	2: 1-3	<b>Wk 1 due Friday Sept. 1 at 7 pm</b>
2	Aug. 29	Constant Acceleration; Free-fall	2: 4-6	2: MC4,9; P33,38,43,47,49,54,62,72
		Motion in 2-dimensions	3: 1-5	3: MC3,8,12; P6,11,20,36,37,40,48,51
		Newton's Laws	4: 1-5	4: MC9,13; P11,20,32,38,44,48
				<b>Wk 2 due Friday Sept. 8 at 7 pm</b>
3	Sept. 4	Labor Day Holiday		
	Sept. 5	Force Diagrams; Examples	5: 1-2	5: MC4,6,9; P6,11,24,31,38,39,40,54
		Friction	5: 3	P59,60,66
				<b>Wk 3 due Thursday Sept 14 at 7 pm</b>
4	Sept. 12	Springs; Examples	5: 4-5	
		Exam review		
		no class		

5	Sept. 19	Circular Motion	6: 1-2	6: MC2,5,12; P5,6,10,14,27,33,38,44
		Gravity; Satellite Motion	6: 3-5	6: P50,51,52
		Work	7: 1-2	7: MC5; P5,6
				<b>Wk 5 due Friday Sept. 29 at 7 pm</b>
6	Sept. 26	Work--Energy	7: 3-5	7: MC3,10; P14,16,19,20,26,27,46,
		Conservation of Energy	7: 6	7: P51,59,70,73,75,80,86
		Nonconservative Forces; Power	7: 7-8	<b>Wk 6 due Friday Oct 6 at 7 pm</b>
7	Oct. 3	Momentum; Collisions	8: 1-4	8: MC1,5; P11,13,16,18,27,28
		Examples		8: 39,57,71
		Impulse; Center of Mass	8: 5-7	<b>Wk 7 due Thursday Oct 12 at 7 pm</b>
8	Oct. 9	No Class; Fall Break		
	Oct. 11	Exam Review		
	Oct. 13	No class		
9	Oct. 17	Rotational Kinematics	9: 1-3	9: MC4,10,12; P18,24, 31,40,44,47,49
		Moments; Moving Axis	9: 4-5	10: MC7; P3,9,11,13
		Torque; Rotational Dynamics	10: 1-2	<b>Wk 9 due Friday Oct 27 at 7 pm</b>
10	Oct. 24	Work; Angular Momentum	10: 3-5	10: MC6; P27,30,33,42,47,55,58,62,65
		Rotational Statics	10: 6	11: MC1,2; P1,24,29,30,36,58,60
		SHM	11: 1-4	<b>Wk 10 due Thursday Nov 2 at 7 pm</b>
11	Oct. 31	SHM; Pendulums	11: 5	11: P42
	Nov. 1	Examples; Review		<b>Wk 11 due Thursday Nov 2 at 7 pm</b>
	Nov. 3	No class		
12	Nov. 7	Waves; Standing Waves	12: 1--7	12: MC3,4,5,7,9; P4,7,12,18
		Interference; Sound	12: 8--12	12: P19,24,30,32,39,40,47,50
		Fluid Statics	13: 1-3	13: MC1,2; P2,19,32,35,57
				<b>Wk 12 due Friday Nov 17 at 7 pm</b>
13	Nov. 14	Expansion; Heat	14: 1--6	14: MC4,5,11; P15,27,32,44,56,62,77
		Heat Transfer; Ideal Gas	14: 7; 15: 1--2	15: MC4,5,6,8,12; P7,12,22
		Kinetic Theory; 1 <sup>st</sup> Law	15: 3--7	15: 37,42,49,52,53,61,70
				<b>Wk 13 due Thursday Nov 30 at 7 pm</b>
14	Nov. 21	Heat Engines	16: 1-6	16: MC2,8,9,12; P7,13,15,20
		Reading Day		<b>Wk 14 due Thursday Nov 30 at 7 pm</b>
		No classes (Thanksgiving)		
15	Nov. 28	Entropy	16: 7-8	16: MC9; P23,26
	Nov. 29	Examples; Review		<b>Wk 15 due Thursday Nov 30 at 7 pm</b>
	Dec. 1	No class		
16	Dec. 4	Review		

# University Policies

This section outlines the university level policies. The TAMU Faculty Senate established the wording of these policies.

**[NOTE:** *Faculty members should not change the written statements. A faculty member may add separate paragraphs if additional information is needed.*]

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## Attendance Policy

The university views class attendance and participation as an individual student responsibility. Students are expected to attend class and to complete all assignments.

Please refer to **Student Rule 7** ([Links to an external site.](#)) in its entirety for information about excused absences, including definitions, and related documentation and timelines.

## Makeup Work Policy

Students will be excused from attending class on the day of a graded activity or when attendance contributes to a student's grade, for the reasons stated in Student Rule 7, or other reason deemed appropriate by the instructor.

Please refer to **Student Rule 7** ([Links to an external site.](#)) in its entirety for information about makeup work, including definitions, and related documentation and timelines.

Absences related to Title IX of the Education Amendments of 1972 may necessitate a period of more than 30 days for make-up work, and the timeframe for make-up work should be agreed upon by the student and instructor" (**Student Rule 7, Section 7.4.1** ([Links to an external site.](#))).

"The instructor is under no obligation to provide an opportunity for the student to make up work missed because of an unexcused absence" (**Student Rule 7, Section 7.4.2** ([Links to an external site.](#))).

Students who request an excused absence are expected to uphold the Aggie Honor Code and Student Conduct Code. ([See Student Rule 24](#) ([Links to an external site.](#))).

## Academic Integrity Statement and Policy

"An Aggie does not lie, cheat or steal, or tolerate those who do."

"Texas A&M University students are responsible for authenticating all work submitted to an instructor. If asked, students must be able to produce proof that the item submitted is indeed the work of that student. Students must keep appropriate records at all times. The inability to authenticate one's work, should the instructor request it, may be sufficient grounds to initiate an academic misconduct case" ([Section 20.1.2.3, Student Rule 20](#) ([Links to an external site.](#))).

### Texas A&M at College Station

You can learn more about the Aggie Honor System Office Rules and Procedures, academic integrity, and your rights and responsibilities at [aggiehonor.tamu.edu](http://aggiehonor.tamu.edu) ([Links to an external site.](#)).

### Texas A&M at Galveston

You can learn more about the Honor Council Rules and Procedures as well as your rights and responsibilities at [tamug.edu/HonorSystem](http://tamug.edu/HonorSystem). (Links to an external site.)

### **Texas A&M at Qatar**

You can learn more about academic integrity and your rights and responsibilities at Texas A&M University at Qatar by visiting the [Aggie Honor System \(Links to an external site.\)](#) website.

## **Americans with Disabilities Act (ADA) Policy**

Texas A&M University is committed to providing equitable access to learning opportunities for all students. If you experience barriers to your education due to a disability or think you may have a disability, please contact Disability Resources office on your campus (resources listed below). Disabilities may include, but are not limited to attentional, learning, mental health, sensory, physical, or chronic health conditions. All students are encouraged to discuss their disability related needs with Disability Resources and their instructors as soon as possible.

### **Texas A&M at College Station**

Disability Resources is located in the Student Services Building or at (979) 845-1637 or visit [disability.tamu.edu](http://disability.tamu.edu) (Links to an external site.).

### **Texas A&M at Galveston**

Disability Resources is located in the Student Services Building or at (409) 740-4587 or visit [tamug.edu/counsel/Disabilities](http://tamug.edu/counsel/Disabilities) (Links to an external site.).

### **Texas A&M at Qatar**

Disability Services is located in the Engineering Building, room 318C or at +974.4423.0316 or visit <https://www.qatar.tamu.edu/students/student-affairs/disability-services>. (Links to an external site.)

## **Title IX and Statement on Limits to Confidentiality**

Texas A&M University is committed to fostering a learning environment that is safe and productive for all. University policies and federal and state laws prohibit gender-based discrimination and sexual harassment, including sexual assault, sexual exploitation, domestic violence, dating violence, and stalking.

With the exception of some medical and mental health providers, all university employees (including full and part-time faculty, staff, paid graduate assistants, student workers, etc.) are Mandatory Reporters and must report to the Title IX Office if the employee experiences, observes, or becomes aware of an incident that meets the following conditions (see [University Rule 08.01.01.M1 \(Links to an external site.\)](#)):

- The incident is reasonably believed to be discrimination or harassment.
- The incident is alleged to have been committed by or against a person who, at the time of the incident, was (1) a student enrolled at the University or (2) an employee of the University.

Mandatory Reporters must file a report regardless of how the information comes to their attention – including but not limited to face-to-face conversations, a written class assignment or paper, class discussion, email, text, or social media post. Although Mandatory Reporters must file a report, in most instances, a person who is subjected to the alleged conduct will be able to control how the report is

handled, including whether or not to pursue a formal investigation. The University's goal is to make sure you are aware of the range of options available to you and to ensure access to the resources you need.

### **Texas A&M at College Station**

*Students wishing to discuss concerns in a confidential setting are encouraged to make an appointment with [Counseling and Psychological Services \(Links to an external site.\)](#) (CAPS).*

*Students can learn more about filing a report, accessing supportive resources, and navigating the Title IX investigation and resolution process on the University's [Title IX webpage \(Links to an external site.\)](#).*

### **Texas A&M at Galveston**

*Students wishing to discuss concerns in a confidential setting are encouraged to make an appointment with the Counseling Office in the Seibel Student Center, or call (409)740-4587. For additional information, visit [tamug.edu/counsel](http://tamug.edu/counsel) (Links to an external site.).*

*Students can learn more about filing a report, accessing supportive resources, and navigating the Title IX investigation and resolution process on the Galveston Campus' [Title IX webpage \(Links to an external site.\)](#).*

### **Texas A&M at Qatar**

*Texas A&M University at Qatar students wishing to discuss concerns in a confidential setting are encouraged to visit the [Health and Wellness \(Links to an external site.\)](#) website for more information.*

*Students can learn more about filing a report, accessing supportive resources, and navigating the Title IX investigation and resolution process on the University's [Title IX webpage \(Links to an external site.\)](#).*

## **Statement on Mental Health and Wellness**

Texas A&M University recognizes that mental health and wellness are critical factors that influence a student's academic success and overall wellbeing. Students are encouraged to engage in healthy self-care by utilizing available resources and services on your campus.

### **Texas A&M College Station**

*Students who need someone to talk to can contact [Counseling & Psychological Services \(Links to an external site.\)](#) (CAPS) or call the [TAMU Helpline \(Links to an external site.\)](#) (979-845-2700) from 4:00 p.m. to 8:00 a.m. weekdays and 24 hours on weekends. 24-hour emergency help is also available through the National Suicide Prevention Hotline (800-273-8255) or at [suicidepreventionlifeline.org](http://suicidepreventionlifeline.org) (Links to an external site.).*

### **Texas A&M at Galveston**

*Students who need someone to talk to can call (409) 740-4736 from 8:00 a.m. to 5:00 p.m. weekdays or visit [tamug.edu/counsel](http://tamug.edu/counsel) (Links to an external site.) for more information. For 24-hour emergency assistance during nights and weekends, contact the TAMUG Police Dept at (409) 740-4545. 24-hour emergency help is also available through the National Suicide Prevention Hotline (800-273-8255) or at [suicidepreventionlifeline.org](http://suicidepreventionlifeline.org) (Links to an external site.).*

### **Texas A&M at Qatar**

*Texas A&M University at Qatar students wishing to discuss concerns in a confidential setting are encouraged to visit the [Health and Wellness \(Links to an external site.\)](#) website for more information.*

## Campus Specific Policies

### Texas A&M at Galveston

#### Classroom Access and Inclusion Statement

Texas A&M University is committed to engaged student participation in all of its programs and courses and provides an accessible academic environment for all students. This means that our classrooms, our virtual spaces, our practices and our interactions are as inclusive as possible and we work to provide a welcoming instructional climate and equal learning opportunities for everyone. If you have an instructional need, please notify me as soon as possible.

The Aggie Core values of respect, excellence, leadership, loyalty, integrity and selfless service in addition to civility, and the ability to listen and to observe others are the foundation of a welcoming instructional climate. Active, thoughtful and respectful participation in all aspects of the course supports a more inclusive classroom environment as well as [our \(Links to an external site.\) mutual \(Links to an external site.\)](#) responsibilities to the campus community.

*The following statements below are optional. Leave as is to include, or delete if preferred. Either way, delete this note.*

#### Statement on the Family Educational Rights and Privacy Act (FERPA)

FERPA is a federal law designed to protect the privacy of educational records by limiting access to these records, to establish the right of students to inspect and review their educational records and to provide guidelines for the correction of inaccurate and misleading data through informal and formal hearings. Currently enrolled students wishing to withhold any or all directory information items may do so by going to [howdy.tamu.edu](http://howdy.tamu.edu) (Links to an external site.) and clicking on the "Directory Hold Information" link in the Student Records channel on the MyRecord tab. The complete [FERPA Notice to Students \(Links to an external site.\)](#) and the student records policy is available on the Office of the Registrar webpage.

Items that can never be identified as public information are a student's social security number, citizenship, gender, grades, GPR or class schedule. All efforts will be made in this class to protect your privacy and to ensure confidential treatment of information associated with or generated by your participation in the class.

Directory items include name, UIN, local address, permanent address, email address, local telephone number, permanent telephone number, dates of attendance, program of study (college, major, campus), classification, previous institutions attended, degrees honors and awards received, participation in officially recognized activities and sports, medical residence location and medical residence specialization.