

Abilene Approval Chart for Curriculum Changes

A = Approve I = Information Item R = Respond in Writing

Course Number PHYS 220 Engineering Physics I or Degree Plan(s) _____
 State the requested change and reason. A memo may be attached if more space is necessary.

We would like to add PHYS 220 Engineering Physics I to the menu for the Life and Physical Sciences in the University Requirements. Explanation and justification is provided in the attached application.

Indicate the requested change.

	Change to a Course	Dept./School ¹	College	Dean	TEC	UGEC	AUAC/Grad	Provost	President
1.	Title (description unchanged)	A	A	A	I	-	I	I	I
2.	Description (not affecting content)	A	A	A	I	-	I	I	I
3.	Course term(s)	A	I	A	I	-	I	I	I
4.	Content (change of course outcomes)	A	A	A	I	-	I	A	I
5.	Number of hours (lecture, lab, contact)	A	A	A	A	-	A	A	I
6.	Course number within the hundred	A	A	I	I	-	I	I	I
7.	Course number beyond the hundred	A	A	A	A	-	A	A	I
8.	Prerequisites	A	A	A	I	-	I	I	I
9.	Course fee(s)	A	-	A	-	-	-	A	I
10.	From U to G or G to U	A	A	A	A	-	A	A	I
11.	Cross-list course	A	A	A	A	-	A	A	I
12.	Department of record	A	A	A	A	-	A	A	I
13.	Close a course	A	A	A	A	-	A	A	I
14.	New course (includes combining or splitting courses)	A	A	A	A	-	A	A	I

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	Change to the University Requirements (All Campuses)	Dept./School ¹	College	Dean	TEC	UGEC	AUAC/Grad	Provost	Faculty	President	Trustees
1.	University Requirements — Change course outcomes of an included course ²	A	A	A	—	A	—	A	—	A	—
2.	University Requirements — Add or drop a required course from the University Requirements ²	A	A	A	—	A	—	A	A	A	—
3.	University Requirements — Add or drop a course from a menu within the University Requirements ²	A	—	—	—	A	—	A	—	A	—
4.	University Requirements — Change hours within a menu in the University Requirements ²	A	A	A	—	A	—	A	A	A	—
	Change to Catalog Information (for Campus)										
1.	General Requirements for Bachelor's Degrees and Associate's Degrees	—	—	—	—	—	A	A	A	A	—
2.	Policies governing academic probation and suspension	—	—	—	—	—	A	A	A	A	—
3.	Requirements for graduating with honors	—	—	—	—	—	A	A	A	A	—
	Change to a Degree Plan Proposed by Faculty or College										
5.	Educational Program — Revise ³	A	A	A	A	—	A	A	—	A	—
6.	Educational Program — Adopt/change admission requirements	A	A	A	A	—	A	A	—	A	—
7.	Educational Program — Add ³	A	A	A	A	—	A	A	A	A	I
8.	Educational Program — Discontinue	A	A	A	A	—	A	A	A	A	I
9.	GPA — Revise program-required GPAs	A	A	A	A	—	A	A	—	A	—
10.	Minor — Revise	A	A	A	I	—	I	I	—	I	—
11.	Minor — Add	A	A	A	A	—	A	A	—	A	—
12.	Minor — Discontinue	A	A	A	A	—	A	A	—	A	—
13.	Degree — Add	A	A	A	A	—	A	A	A	A	I
14.	Degree — Discontinue	A	A	A	A	—	A	A	A	A	I
	Change to a Degree Plan Proposed By Provost										
15.	Educational Program — Discontinue	R	—	R	A	—	A	A	A	A	I
16.	Minor — Discontinue	R	—	R	A	—	A	A	—	A	—
17.	Degree — Discontinue	R	—	R	A	—	A	A	A	A	I

¹ When an academic unit does not have a council, the UGEC and/or AUAC will serve as its academic council, depending on the nature of the issue.

² Courses that satisfy ACU's University Requirements will normally have lower-level numbering, be free of prerequisites and co-requisites, appeal to more than one or two majors, and "not narrowly focus on those skills, techniques, and procedures specific to a particular occupation or profession" (SACS 2.7.3). Departments may request exceptions to the first three criteria.

³ For undergraduate majors, a minimum of 30 hours is required. These programs must have a minimum of 6 elective hours, unless the requirements of external accrediting bodies make it impossible.

Revised 8-29-22

Department/School Chair(s)	
 Signature	9/14/22 Approval date
_____ Signature	_____ Approval date

College Academic Council(s)	
_____ Signature	_____ Approval date
_____ Signature	_____ Approval date

Dean(s)	
_____ Signature	_____ Approval date
_____ Signature	_____ Approval date

Teacher Education Council	
_____ Chair's signature	_____ Approval date

University General Education Council	
_____ Chair's signature	_____ Approval date

Abilene Undergraduate Academic Council	
_____ Chair's signature	_____ Approval date

Graduate Council	
_____ Chair's signature	_____ Approval date

Provost	
_____ Signature	_____ Approval date

Faculty	
_____ Chair of Faculty Senate	_____ Approval date

President	
_____ Signature	_____ Approval date

Application for Life and Physical Sciences Menu

Guidelines For All General Education Courses

1. All general education courses must be 100-level or above.
2. General education courses should present a breadth of knowledge, not focusing on skills, techniques, and procedures specific to a particular occupation or profession.
3. Individual courses will fulfill only a single general education requirement.
4. Courses free of prerequisites are preferred. Applications to add courses with prerequisites must provide additional evidence that the course contributes to a student's breadth of knowledge and is not specific to a particular occupation or profession.
5. Each course may appear on a maximum of two menus that accept applications (arts and humanities, cultural literacy, life and physical sciences, and social and behavioral sciences).

Life and Physical Sciences Description

Courses within this domain use the methods and models of the natural sciences to describe, explain, and predict phenomena in the physical world; they employ empirical evidence, scientific principles, and interactions among natural phenomena to understand the world around us.

Instructions

Complete this form and submit it with a course syllabus and approval chart to the University General Education Council. Faculty submitting an application should be prepared to perform annual assessment for their course. The assessment will be conducted with the rubric included in this course application.

Subject code, course number, and title of course:	PHYS 220, Engineering Physics I
Terms offered:	Fall, Spring
Catalog description:	Mechanics of particles, rigid bodies, fluids, and wave motion.
Course prerequisites:	MATH 185
Cross-listed courses: *Note: Many gen ed courses are cross-listed between the Abilene and Dallas campuses.	
Other general education menus on which the course appears or you are applying for:	

Prerequisites

The council understands that many of the courses on this menu will have corequisites and that the second course in a sequence may also have a prerequisite.

1. Is the course a lower-division (100- to 200-level) course in astronomy, biology, chemistry, physics, agricultural science, environmental science, or geology?
☒ Yes ☐ No

If yes, continue to 2. If no, please explain how this course meets the description of life or physical sciences above. Applications for courses originating in other disciplines will be considered.

2. Does the course have more than one prerequisite and/or more than one corequisite?
☐ Yes ☒ No

If yes, continue to 3. If no, please explain why an exception should be made to include this course in the Life and Physical Sciences menu.

3. If the course has prerequisites, provide evidence that the course contributes to a student's breadth of knowledge. Also provide evidence that the course content is not specific to a particular occupation or profession (200 words or less).

This course covers the basic physics of mechanics, i.e. how objects move and the forces needed to make that motion happen. This material can be useful to anyone wanting a deeper understanding of moving objects and forces. This will allow them to make calculations using equations to describe situations in quantitative rather than in qualitative ways. The only prerequisite, Math 185 – Calculus, ensures students have the math skills required to use the equations and techniques needed to apply them.

Relevant Outcomes

- C2: Analyze quantitative data, published writing, or observable phenomena to draw informed conclusions.
- C3: Interpret mathematical and/or logical models such as formulas, graphs, tables and schematics, and draw inferences from them; and
- C4: Integrate new data into their existing knowledge.

Describe how the course meets the C2 outcome (100 words or less).

Students completing this course will learn how to describe and calculate the motion of objects as seen in our everyday experiences. They learn about the position, velocity, and acceleration of objects and the forces that cause this motion. They also learn conservation laws that govern this motion. Upon completion students can describe quantitatively the motion of objects in everyday life.

Describe how the course meets the C3 outcome (100 words or less).

The motion of objects is governed by conservation laws and forces applied to them. Upon finishing this course students will know the mathematical formulas that describe these laws and how to apply them and how to present the results of their calculations using equations and graphs as appropriate.

Describe how the course meets the C4 outcome (100 words or less).

Students will be expected to solve real world problems using techniques taught in class. This includes applying these techniques to new problems that they have not seen before. Students will also be introduced to some of the data that led to the development of these laws and equations. Upon finishing this course, students will have developed new intuition for how everyday objects move and interact.

Outcomes assessment should occur within one or two exams/assignments. Please indicate which exams or assignments will be used for each outcome. Provide assignment prompts if available.

Area to Be Assessed	Assessment Artifact
Outcome C2	Exam Questions
Outcome C3	Force Concept Inventory
Outcome C4	Force Concept Inventory

Outcome C2 will be assessed using quantitative questions from Exam 1 for the concept of conservation of momentum, Exam 2 for the concept of conservation of energy, and Exam 3 for applications of calculus.

The Force Concept Inventory (FCI) is a published assessment for evaluating the conceptual understanding of forces and object motion. It is a well known standard in Physics Education Research. We are asked to protect the integrity of this assessment so I will not attach it but can provide it if needed. This is administered using a pre and post test methodology. The pre test for most students occurs in ENGR 115 and the post test is given at the end of the semester. Outcome C3 will be based on a subset of the FCI questions which involve students evaluating graphs or diagrams or using formulas. Outcome C4 will be based on the normalized gain in FCI score as this change reports how well they have added the course material to their knowledge base.

Please use the following rubric to perform assessment each year.

Student Learning Outcome C2

Students will be able to:	Shortcomings	Meets Expectations	Points of Excellence
Analyze data to draw conclusions	Lacks sufficient analysis of data or published writing.	Analyzes data and/or published writing in an effective manner.	Analyzes data and/or published writing in an exemplary manner.

Students earning less than 60% of the points will be placed in the "Shortcomings" category, those between 60% and 90% will be in the "Meets Expectations" category, and those with 90% or higher will be in the "Points of Excellence" category.

Student Learning Outcome C3

Students will be able to:	Shortcomings	Meets Expectations	Points of Excellence
Interpret mathematical and/or logical models such as formulas.	Little to no demonstrated ability to interpret relationships and/or data in models.	Demonstrates ability to interpret relationships and/or data in models.	Exceptional ability to interpret relationships and/or data in models.

Students earning less than 60% of the points will be placed in the "Shortcomings" category, those between 60% and 90% will be in the "Meets Expectations" category, and those with 90% or higher will be in the "Points of Excellence" category.

Student Learning Outcome C4

Students will be able to:	Shortcomings	Meets Expectations	Points of Excellence
Integrate new data into their existing knowledge	Shows little to no grasp of new information and/or does not demonstrate adequate connection to previous learning.	Grasps new information and makes connections to previous learning.	Exceptional grasp of new information and/or demonstrates outstanding ability to connect to previous learning.

Students earning less than 60% of the points will be placed in the "Shortcomings" category, those between 60% and 90% will be in the "Meets Expectations" category, and those with 90% or higher will be in the "Points of Excellence" category.

Engineering Physics I

Instructor: Dr. Jim Drachenberg (jld00a@acu.edu)

About the Course

EPI is the study of introductory mechanics. This course serves as a foundation for many of your higher-level courses in engineering, physics, and other sciences. We will learn the basics about linear and rotational motion, Newton's laws of gravity, and Einstein's special theory of relativity. Perhaps most importantly, we will develop a set of critical-thinking, problem-solving tools that will serve you well in whatever you set your mind to do in the future. *I am excited to learn with you, this semester!*

Course number and title: PHYS 220 – Engineering Physics I

Credit hours: 3

Semester and year: Spring 2022

Meeting time: 220-01: Monday, Wednesday, and Friday at 1:00-1:50 PM
220-02: Monday, Wednesday, and Friday at 12:00-12:50 PM

Meeting place: Onstead Science Center (OSC) 342
For your convenience, here is a [link to the ACU campus map](#).

YouTube Channel: [click here](#)

Prerequisites/corequisites: Prerequisite: MATH 185. Corequisite: PHYS 221. May be used to satisfy University Requirements.

Catalog description: Mechanics of particles, rigid bodies, fluids, and wave motion.

Intended audience: Freshman and sophomore science majors.

About the Teacher

Instructor: Dr. Jim Drachenberg, Associate Professor

Office location: Onstead Science Center (OSC) 123A

Phone number(s): (325) 674-6150

Email address: jld00a@acu.edu. You may also contact me through the Canvas course.

Office hours/Contact expectations: MTWRF 3 – 4 PM or by appointment. I welcome virtual appointments on [Google Meet](#), meeting code: drach_officehours

Mission Statements

ACU Mission: The mission of Abilene Christian University is to educate students for Christian service and leadership throughout the world.

College Mission: The College of Arts and Sciences endeavors to educate students for worldwide Christian service and leadership through programs of study and other learning experiences that blend a liberal arts education with professional and career education. The college offers a broad spectrum of programs in the arts, humanities, social sciences, behavioral sciences, natural sciences, and mathematics as well as professional and pre-professional programs. Many courses in the college are designed to provide a unique liberal arts education from a Christian perspective to students of all majors throughout the university.

Department Mission: ACU undergraduate engineering and physics majors pursue a deeper understanding of the physical world through theory, application, analysis and practical design. Their education comes under the mentorship of dedicated Christian engineers who bring a variety of experiences and backgrounds to the table and who guide students as they develop technical knowledge and skills the professional practice skills that prepare them for engineering careers. At ACU, we admire God's handiwork in the laws of the universe and seek to understand and apply those principles to solve big problems while improving the lives of people around the world.

Unique Christian Perspective:

"The heavens are telling of the glory of God; And their expanse is declaring the work of His hands."

— Psalm 19:1

Engineering Physics is a two-semester sequence of courses giving a broad introduction to the fundamental physical laws. In these courses and their labs, we begin to peel back the top layers of our universe. What we observe with our own senses is the ordered nature of creation and the predictability of its apparent rules. We also begin to see that every observation we make comes with a recognition of our limitations. We cannot explain anything we observe with absolute certainty! We begin to see that our Creator has gifted us with a universe that humbles us with its complexity and vastness—a reflection of His Divine nature—yet is navigable and applicable for blessing the lives of others—a reflection of His Own grace and mercy.

Course Content

Outline of topics:

- Foundations
- Motion in one dimension
- Acceleration
- Momentum
- Energy
- Galilean relativity
- Interactions
- Force
- Work
- Motion in a plane
- Motion in a circle
- Torque
- Gravity
- Special relativity

Format of Class

Format of Class: Come to class prepared to engage and ask questions! Learning is most effective—and *certainly more fun!*—when there is active discussion between you, your peers, and me. To that end, here is how I expect you to prepare for class

- Complete the assigned reading in the textbook
- Watch and complete the pre-lecture video and quiz on Canvas
- In the Canvas discussion for the day, dialogue on what you found easiest, what you found most difficult, and what you would like to discuss further in class

In class, we will focus on working problems together and discussing the material on which you most need help. While I come prepared, ***I always welcome your feedback***, e.g. in class, in office hours, over e-mail, or through Canvas discussions.

On-line: If we ever need to meet on-line, we will use [Google Meet](#), code: ep1. In such instances, we will generally meet during our normal class times and do our best to recreate the face-to-face experience. In light of this, it is extremely important that you continue to come prepared.

Instructional Materials

Textbook: Principles & Practice of Physics by Eric Mazur

Other materials:

- Pre-lecture videos and PowerPoint lecture slides are always posted in Canvas
- My videos can also be accessed from my [YouTube channel](#)

Learning Outcomes

Course goal and competencies: Students will understand the concepts of momentum, energy, acceleration, and the application of Newton's laws of motion. Students will be able to identify and understand basic mathematics and physics of linear and rotational motion. Students will be able to identify, understand, and solve problems in situations involving acceleration, rotational acceleration, gravitational interactions, and special relativity.

Assessment and Grading

Assessment activities: Your course grade will be determined from daily quizzes and discussions, weekly homework assignments, periodic exams, and the cumulative final exam. Approximate weights are as follows:

Exams (3)	15% each for a total of	45%
Video Quizzes		7.5%
Participation and chapter discussions		7.5%
Homework		25%
Final Exam		15%

Final grade calculation:

Range of Points	Final Letter Grade
90%-100%	A
80%- 89%	B
65%-79%	C
55%-64%	D
Below 55%	F

Rules for discussing grades: Please respect the privacy of your peers and do not pressure your classmates to discuss their grades with you. I welcome the opportunity to discuss any of your grades. Grades are considered set two weeks after the grades have been posted to Canvas. Any objection must be received prior to conclusion of the two-week period, otherwise I will assume you consent to the posted grade.

Exams: There will be three exams during the semester. Make-up exams may be administered only for university-approved absences, e.g. university-sponsored activity, provided you furnish me with written notification and documentation **prior to the absence**. *There will be no make-up final exam.*

Homework: Homework will be due every week and should be of professional quality. Each page must have your name, submission date, course assignment, and page number near the top right of each page. Final answers should be underlined or boxed. *Failure to follow these guidelines may result in immediate return of homework with a grade of zero.*

Homework will be graded and returned promptly according to the course homework rubric (included in this syllabus). In general, no credit will be given for a correct answer

unless it is accompanied by a complete and correct derivation of how you arrived at the solution (usually including explanation in words). While one point of a particular problem is to find the answer, a major goal of this class is to help you understand how to construct the answers for *many* problems. You are allowed to make corrections for up to 90% of the original maximum assignment score. Corrections must be submitted within 2 class periods of receiving the graded homework and must be 100% correct to receive credit.

In order to assist you in cultivating the discipline of meeting deadlines, **assignments must be submitted on time in order to receive credit**. If you are absent for any reason—including university approved activities—on an assignment due date you must contact me for instructions prior to the date the assignment is due.

Video Quizzes: As part of your daily preparation for class, complete the textbook reading for the day and a video quiz over the day's material. Video quizzes are *formative* assessments. In other words, the goal of the video quizzes is to help you learn the material rather than to test what you know. To that end, I am delighted for you to take the video quizzes as many times as you wish to earn a 100. Take advantage!

Chapter Discussions: After completing the chapter reading and video quiz, I want you to have the opportunity to discuss your thoughts on the material. As a part of your daily preparation for class, participate in a discussion forum to share with me and with your classmates what you found easiest, most difficult, and what you would like to discuss in class. I will read the threads and incorporate your feedback into our class time. Feel free to comment on each other's threads and ask questions! I will try to respond to any questions you have, as well. These discussions are completion grades, intended as an opportunity to communicate regularly with me and with your peers.

EP2 Problem Solving Scorecard

<i>Points</i>	0	2	4
<i>Setup</i>	No setup clearly shown	Partial diagram and/or knowns	Clear diagram and/or knowns clearly written
<i>Problem Solving Approach</i>	No obvious problem-solving plan	Problem solving approach is unclear or inappropriate	Problem solving approach is clear and appropriate
<i>Work and Clarity</i>	Little to no work shown	Work is not easy to follow	Work is understandable and easy to follow
<i>Solution</i>	No solution	Solution is wrong or incomplete	Correct solution with supporting work
<i>Units</i>	No Units	Units are incorrect or partially correct	Units are correct
<i>Evaluation</i>	No evaluation of solution	Cursory evaluation given	Compelling discussion of the solution and why it is (or is not) reasonable

University Policies

ADA Compliance Policy:

Abilene Christian University is dedicated to removing barriers and opening access for students with disabilities in compliance with ADA and Section 504 of the Rehabilitation Act. The Alpha Scholars Program facilitates disability accommodations in cooperation with instructors. In order to receive accommodations, you must be registered with Alpha Scholars Program, and you must complete a specific request for each class in which you need accommodations. If you have a documented disability and wish to discuss academic accommodations, please email alpha@acu.edu call their office directly at 325-674-2667.

Academic Integrity Policy:

Academic integrity is defined as academic work completed as assigned for each class by the individual or group responsible for the work. Violations of academic integrity and other forms of cheating involve the intention to deceive, mislead, or misrepresent and therefore, are a form of lying. Such actions are contrary to behavioral norms that flow from the nature of God. Academic misconduct includes, but is not limited to, the following: 1) Failure to give credit to sources used in a work in an attempt to present the work as one's own, 2) Submission of papers or projects obtained from another source (e.g., research service or club paper file) as one's own, and 3) Falsifying information orally or in writing. Academic misconduct may result in, but is not limited to, a zero on the assignment and/or an F in the course. Additionally, the department chair, Dean of your school, and the Dean of Student Life will be notified. See the full university policy, including how to appeal a decision, by following [this link](#).

Anti-Harassment Policy:

As a professor, one of my responsibilities is to help create a safe learning environment on our campus. I also have a mandatory reporting responsibility related to my role as a professor. It is my goal that you feel able to share information related to your life experiences in classroom discussions, in your written work, and in our one-on-one meetings. I will seek to keep the information you share private to the greatest extent possible. When I am not able to keep your information confidential, I will only share it with responsible administrators on campus who can provide you with services and resources. I am required to share with the Title IX Coordinator information regarding sexual misconduct or harassment, dating or domestic violence or stalking that you report to me. If you would prefer to share information in a confidential setting, I encourage you to speak with someone in the [ACU Counseling Center](#). All of your options are available for review by clicking on the link to ACU's [policy](#).

Course Policies

Attendance/tardiness: Please do not attend in person if you feel ill, are experiencing symptoms of illness, or have a confirmed exposure to someone with a contagious illness, e.g., COVID-19. Unless you are ill, taking precautions for illness, or engaged in a university-approved activity, daily attendance is *essential*. If you must be absent, notify me **beforehand**. If you cannot notify me beforehand, contact me as soon as possible to let me know the reason. Regardless of absence, you are responsible for the material. If absent from an exam, your grade will be zero unless I grant prior approval. You must be on-time to class. Persistent tardiness is grounds for a reduction in your overall grade.

Participation: Participation in class is critical for you, your peers, and for me to be the effective instructor you deserve. Participation will be considered in your final grade assessment at my discretion. Misconduct in class will not be tolerated. Mistreatment of others, including breach of verbal decorum, is grounds for removal from class. Refer to the [ACU student handbook](#) for more information on such policies.

On-line Decorum: Just as you treat people with respect in the classroom, I expect you to extend that respect to on-line forums, as well. Exercise the Golden Rule with liberality and give each other the benefit of the doubt, when possible.

Dress Code: Please follow the student guide. If you aren't sure, don't wear it. Respect your classmates. I reserve the right to ask you to remove hats, e.g. during exams.

Collaboration: Collaboration is strongly encouraged! Collaboration is an essential skill in science and engineering and is also highly valued by employers. Social interactions are critical to success, e.g. most good ideas grow out of discussions with colleagues. Essentially all physicists and engineers work in groups. You are encouraged to find partners or teams in which to work. **HOWEVER**, it is critical for you to "own" material. Assistance should be limited to verbal help. **Do not take written information from others**. This will help you think independently after receiving assistance. Excellent performance on homework correlated with poor performance on exams is one indicator you are receiving too much help. In addition to homework collaboration, there will be time for peer discussion during classes: you should listen to your classmates, try to help overcome confusion, ask questions, critique, and generally teach each other. You will learn abundantly in this way!

Drop Policy: All university policies and deadlines must be followed.

Technology use: Cell phones, laptops, iPods, or other electronic devices are not allowed in face-to-face class unless we use them corporately. If I determine your electronic device is disturbing the class or distracting you or others, whether in a face-to-face or virtual setting, you will be dismissed. If such distractions become a pattern, I will not hesitate from further action, including expulsion from the course.

Academic Integrity: DO. NOT. CHEAT. All university policies concerning academic misconduct—including plagiarism and cheating—apply implicitly to all assessment activities whether or not it is explicitly stated on the assignment. Additionally, I expect you to report academic misconduct if you witness it. *Failure to report academic dishonesty is considered academic dishonesty, at my discretion.* Do not discuss quizzes or exams with anyone who has yet to take them. Please consult me for assistance on homework! However, assignments submitted in your name must reflect your original work. Copying the work of anyone, past or present, is a violation of Academic Integrity and will lead to disciplinary action including but not limited to loss of credit, course grade reduction, and automatic course failure.

Chegg: Aside from learning the laws of physics, one of the most important things you can learn from Engineering Physics is how to solve problems. In life, there are rarely “answers in the back of the book.” When you graduate from our program, our goal is that you are the person other people pay to solve their problems. The only way to get to that point is to practice solving problems *on your own*. Aside from the dishonesty, sites that you pay to solve your homework or exam problems are obviously counterproductive to our goal. Consequently, use of Chegg or any similar website, e.g., that works assignments for you, *for any reason whatsoever*, is strictly prohibited. As a violation of academic integrity, such use is subject to all penalties listed above and is furthermore grounds for immediate dismissal from the course.

Calendar

Refer to Canvas Calendar for the most up-to-date information. Modules are already in place for each week's activity. Please refer to the [university academic calendar](#) for key dates relevant to our campus.

DATE	TOPICS COVERED
01/10	Chapter 1.1-1.5: Foundations
01/12	Chapter 1.6-1.9: Foundations
01/14	Chapter 1: Foundations
01/17	MLK Holiday (no class)
01/19	Chapter 2.1-2.4: Motion in One Dimension
01/21	Chapter 2.5-2.9: Motion in One Dimension
01/24	Chapter 3.1-3.4: Acceleration
01/26	Chapter 3.5-3.8: Acceleration
01/28	Chapter 3: Acceleration
01/31	Chapter 4.1-4.4: Momentum
02/02	Chapter 4.5-4.8: Momentum
02/04	Chapter 4: Momentum
02/07	Chapter 5.1-5.4: Energy
02/09	Exam 1 (Ch. 1-4)
02/11	Chapter 5.5-5.8: Energy
02/14	Chapter 6.1-6.4: Principle of Relativity
02/16	Chapter 6.5-6.8: Principle of Relativity
02/18	Chapter 6: Principle of Relativity
02/21	Chapter 7.1-7.6: Interactions
02/23	Chapter 7.7-7.10: Interactions
02/25	Chapter 7: Interactions
02/28	Chapter 8.1-8.6: Force
03/02	Chapter 8.7-8.12: Force
03/04	Chapter 8: Force
03/07	Chapter 9.1-9.4: Work
03/09	Chapter 9.5-9.8: Work
03/11	Exam 2 (Ch. 5-8)
03/14-03/18	Spring Break (no class)
03/21	Chapter 10.1-10.5: Motion in a Plane
03/23	Chapter 10.6-10.10: Motion in a Plane
03/25	Chapter 10: Motion in a Plane
03/28	Chapter 11.1-11.3: Motion in a Circle
03/30	Chapter 11.4-11.6: Motion in a Circle
04/01	Chapter 11: Motion in a Circle
04/04	Chapter 12.1-12.4: Torque
04/06	Chapter 12.5-12.8: Torque
04/08	Chapter 12: Torque
04/11	Chapter 11 and 12: Motion in a Circle and Torque
04/13	Exam 3 (Ch. 9-12)
04/15	Good Friday (no class)
04/18	Chapter 13.1-13.4: Gravity
04/20	Chapter 13.5-13.8: Gravity
04/22	Chapter 13: Gravity
04/25	Chapter 14.1-14.4: Special Relativity
04/27	Chapter 14.5-14.8: Special Relativity
04/29	Chapter 14: Special Relativity
Final Exam	05/04, 8-9:45 AM (220-01) 05/05, 12-1:45 PM (220-02)

