Abilene Approval Chart for Curriculum Changes

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

Course Number PHYS 222 Engineering Physics II 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 222 Engineering Physics II 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

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

	Change to the University Requirements (All Campuses)	Dept./School[1]	College	Dean	TEC	UGEC	UUAC/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 UUAC 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 222, Engineering Physics II
Terms offered:	Fall, Spring
Catalog description:	Heat, thermodynamics, electricity, and magnetism.
Course prerequisites:	PHYS 220/PHYS 221
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?
   _x_ 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 _x_ 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 provides a strong foundation across many topics of physics: waves, optics, electricity, and magnetism. It is designed as a course to serve many disciplines of science and engineering and is relevant to anyone interested in these topics with the necessary mathematical background of calculus.

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 waves and light. They learn about the forces that govern electrical and magnetic phenomena. Upon completion students can describe these concepts quantitatively.

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

Upon finishing this course students will know the mathematical formulas that describe wave motion and the laws governing electricity and magnetism, 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 wave motion and electrical and magnetic phenomena.

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	Exam Questions
Outcome C4	Exam Questions

Outcome C2 will be assessed using quantitative questions from Exam 1 for the concept of wave motion, Exam 2 for the concept of electric fields, and Exam 3 for the concept of magnetic fields.

Outcome C3 will be assessed using graphical questions from Exam 2 or Exam 3 for the concepts of electric fields, magnetic fields, or equipotentials.

Outcome C4 will be assessed using conceptual / short-answer questions from the final exam.

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 II

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

About the Course

EPII is a study of waves, electricity, and magnetism. At times, these seem like three separate topics. We will learn that all three are entangled in surprising ways, giving us some of our deepest glimpses of the natural world. Our study of electricity and magnetism will challenge us mathematically but also give us a vivid illustration of just how powerful a tool mathematics is for communicating the apparently ordered laws of nature. *I am excited to learn with you, this semester!*

Course number and title: PHYS 222 – Engineering Physics II

Credit hours: 3

Semester and year: Fall 2022

Meeting time: 222-01: Monday, Wednesday, and Friday at 9:00-9:50 AM
222-02: Monday, Wednesday, and Friday at 1:00-1:50 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: PHYS 220/PHYS 221. May be used to satisfy University Requirements. Corequisite: PHYS 223.

Catalog description: Heat, thermodynamics, electricity, and magnetism.

Intended audience: Sophomore science majors.

About the Teacher

Instructor: Dr. Jim Drachenberg, Professor of Engineering and Physics

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: MWF 3:00 – 4:00 PM or by appointment
Days not available: Tuesdays and Thursdays

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:

- Periodic Motion
- Waves in One Dimension
- Waves in Two and Three Dimensions
- Electric Interactions
- The Electric Field
- Gauss's Law
- Work and Energy in Electrostatics
- Charge Separation and Storage
- Magnetic Interactions
- Magnetic Fields of Charged Particles in Motion
- Changing Magnetic Fields
- Changing Electric Fields
- Ray Optics
- Wave and Particle Optics

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 Zoom. In such instances, we will generally meet during our normal class times and do our best to recreate the face-to-face experience, e.g., using break-out rooms periodically to work problems in groups. 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 where waves, electricity, and magnetism fit into the overall model of physics that we have, today. Students will be able to identify and understand basic mathematics and physics of waves and wave motion. Students will be able to identify, understand, and solve problems in situations involving harmonic motion, waves, electrical charge, Gauss's law, magnetism, Ampere's law, and Lenz's law.

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%
Daily Assignments (2 components)		15%
Video Quizzes		*(7.5%)*
Participation and Chapter Discussions		*(7.5%)*
Weekly Assignments (2 components)		25%
At-home completion work		*(5%)*
In-class quizzes		*(20%)*
Final Exam		15%

Final grade calculation:

Range of Points	Final Letter Grade
90%-100%	A
80%- 89%	B
70%-79%	C
60%-69%	D
Below 60%	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.***

Weekly Assignments: Weekly assignment grades have two components. Each week, a small number of homework problems will be assigned and generally due the following Monday. Completed assignments receive 100%.

On the day homework is due, students will take a 5-minute, one-question, in-class quiz. The quiz question will be drawn from one of the following sets of problems: assigned homework, textbook examples, or in-class examples. The quiz will be graded and returned promptly according to the course problem-solving 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 (including, if necessary, an 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 quiz corrections for 50% of the points missed. Corrections must be submitted within 2 class periods of receiving the graded quiz and must be completely correct to receive credit.

Assignments 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***. 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

Points	0	2	4
Setup	No setup clearly shown	Partial diagram and/or knowns	Clear diagram and/or knowns clearly written
Problem Solving Approach	No obvious problem-solving plan	Problem solving approach is unclear or inappropriate	Problem solving approach is clear and appropriate
Work and Clarity	Little to no work shown	Work is not easy to follow	Work is understandable and easy to follow
Solution	No solution	Solution is wrong or incomplete	Correct solution with supporting work
Units	No Units	Units are incorrect or partially correct	Units are correct
Evaluation	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. At your earliest convenience, please let me know that you need to join, remotely. Our class will be accessible to you in a virtual environment, and I will work with you to ensure you have access to the necessary course material and a reasonable opportunity to submit assignments for full credit. 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 breech 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 are unsure, do not 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, e.g., the work of former or current students or utilizing copies of homework solution manuals, 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 an understanding of natural law, one of the most important skills developed in Engineering Physics is problem solving. 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 develop to that point is to practice solving problems *on your own*. Besides the dishonesty, websites that you pay to solve your homework or exams 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
08/29	Chapter 15.1-15.4: Periodic Motion
08/31	Chapter 15.5-15.8: Periodic Motion
09/02	Chapter 15: Periodic Motion
09/05	Chapter 16.1-16.4: Waves in One Dimension
09/07	Chapter 16.5-16.9: Waves in One Dimension
09/09	Chapter 16: Waves in One Dimension
09/12	Chapter 17.1-17.4: Waves in Two and Three Dimension
09/14	Chapter 17.5-17.8: Waves in Two and Three Dimension
09/16	Chapter 17: Waves in Two and Three Dimension
09/19	Chapter 22.1-22.4: Electric Interactions
09/21	Exam 1 (Ch. 15-17)
09/23	Chapter 22.5-22.6: Electric Interactions
09/26	Chapter 23.1-23.4: The Electric Field
09/28	Chapter 23.5-23.8: The Electric Field
09/30	Chapter 23: The Electric Field
10/03	Chapter 24.1-24.5: Gauss's Law
10/05	Chapter 24.6-24.8: Gauss's Law
10/07	Chapter 24: Gauss's Law
10/10	Chapter 25.1-25.3: Work and Energy in Electrostatics
10/12	Chapter 25.4-25.7: Work and Energy in Electrostatics
10/14	Chapter 25: Work and Energy in Electrostatics
10/17	Chapter 26.1-26.4: Charge Separation and Storage
10/19	Chapter 26.5-26.8: Charge Separation and Storage
10/21	Fall Break (no class)
10/24	Chapter 27.1-27.4: Magnetic Interactions
10/26	Chapter 27.5-27.8: Magnetic Interactions
10/28	Exam 2 (Ch. 22-26)
10/31	Chapter 28:1-28.4: Magnetic Fields of Charged Particles in Motion
11/02	Chapter 28:5-28.8: Magnetic Fields of Charged Particles in Motion
11/04	Chapter 28: Magnetic Fields of Charged Particles in Motion
11/07	Chapter 29.1-29.4: Changing Magnetic Fields
11/09	Chapter 29.5-29.8: Changing Magnetic Fields
11/11	Chapter 29: Changing Magnetic Fields
11/14	Chapter 30.1-30.3: Changing Electric Fields
11/16	Chapter 30.4-30.7: Changing Electric Fields
11/18	Chapter 30: Changing Electric Fields
11/21	Exam 3 (Ch. 27-30)
11/23 11/25	Thanksgiving Break (no class)
11/28	Chapter 33.1-33.4: Ray Optics
11/30	Chapter 33.5-33.8: Ray Optics
12/02	Chapter 33: Ray Optics
12/05	Chapter 34.1-34.5: Wave and Particle Optics
12/07	Chapter 34.6-34.10: Wave and Particle Optics
12/09	Chapter 34: Wave and Particle Optics
12/15	Final Exam (Ch. 15-17, 22-30, 33-34) 8-9:45 AM (222-02) or 2-3:45 PM (222-01)