PH2200 University Physics II - Electricity & Magnetism Summer 2025

Instructor	Dr. Pati
E-mail	patir@mtu.edu (preferred channel for communication)
Canvas	https://mtu.instructure.com/login
MasteringPhysics	https://mlm.pearson.com/northamerica/masteringphysics
Class	ONLINE (June 23, 2025-August 8,2025)

Online Coach	**David Gordon (e-mail: djgordon@mtu.edu)**
Additional help	**Nathan Black (email:ndblack@mtu.edu)**
TA	**Kumar Neupane (e-mail: kumarn@mtu.edu)**

COURSE DESCRIPTION

This seven-week calculus-based electromagnetism course will be offered ONLINE using the CANVAS learning management system by Instructure. We will explore some awesome physics in this course that includes Coulomb's law, electric fields, Gauss's law, circuits, magnetic field, Ampere's law, induction, Maxwell equations, and electromagnetic waves. This course will not be different from the regular sit-down classes you are used to, but there will be some differences in the delivery approach.

Recorded lectures and slides will be posted every week on CANVAS; **quizzes & exams** will be administered through Canvas. Before viewing each recorded lecture/slide, you are required to read appropriate **reading assignments** to finish a multiple-choice reading quiz question. The quiz is intended to encourage you to read the relevant chapter before viewing the lecture. You are also required to buy access to **Mastering Physics** (either through the Inclusive Access plan offered for this course or through other options described in the syllabus), the online homework and tutorial system, for completing your practice problems and **homework assignments**. There will be **three comprehensive exams** in this course; the first two exams will be of 120-minute duration each and the final exam will be three hours long. Exams will be administered through Canvas using ***LockDown Browser*** at the stipulated dates and times**.**

Important: The final exam will be a proctored exam. It requires a video conferencing system (ZOOM). You need to have another device with Zoom preinstalled. You are required to open the Zoom with video ON before the 15 minutes of the exam; the TA and instructor should be able to see you and the table on which you are taking the exam. The Zoom link will be provided one week before the final exam. It is your responsibility to connect through Zoom before taking the final exam using the lockdown browser in Canvas. Your final exam score will not be counted unless you connect through Zoom before taking the final exam on CANVAS using Lockdown Browser.

All exams will be closed books and closed notes. You may print the PH2200 formula sheet posted on Canvas to use during your exams. You will need a scientific calculator for the exams; however, equations should not be stored in the calculators. You may also print the **assignment schedule** posted on Canvas for your reference. Due dates and times (ET time zone) for various assignments can be found in the assignment schedule.

Please note that you need to complete all tasks in each Module in **sequential order** to progress to your next task. For example: in the Week 1 Module, unless you go open the Lecture 1 Slides page, you can not go to the Lecture 1 Video page. Similarly, unless you open the Lecture 1 Video page, you can not complete the Reading Quiz for **June 24**.

To start, log in to CANVAS (**https://mtu.instructure.com/login**), go to the homepage for PH2200 (University Physics II- Electricity & Magnetism), and click on the **Course Details** link. This will take you to **Course Orientation** and **Weekly** modules. Please complete all the tasks in the **Course Orientation** Module before starting the weekly Module on **June 23**.

INTRODUCTION

The Fundamental Questions

Questions are crucial to learning. It's through the process of inquiry that we construct our knowledge of the natural world. We will address the following five fundamental questions in our study of electricity and magnetism:

1. What are the properties of electric charge?
2. How are electric fields created by electric charges, and how do electric charges respond to electric fields?
3. What are the fundamental physical principles by which electric circuits operate?
4. How are magnetic fields created by electric charges, and how do electric charges respond to magnetic fields?
5. How do electric and magnetic fields change with time?

The Goals

The goals of this course are for you to become familiar with the phenomena of electromagnetism and to develop a theory/model to explain those phenomena.

1. We will learn to develop the robust problem-solving skills required by professional engineers and scientists through practice problems and assignments.
2. We will learn to use qualitative reasoning, pictorial and graphical reasoning, and reasoning by analogy by viewing recorded lectures.
3. We will learn to make use of mathematics to help us understand and describe patterns and relationships that exist in nature.

The Methodology

The basic methodology of PH2200 can be summarized as follows:

1. Read about it (textbook)
2. Untangle it (through viewing recorded lectures)
3. Practice with it (end-of-chapter homework)
4. Apply it (web-based graded exercises and problems through MasteringPhysics)

The order of the above items is very important. Your first exposure to any material will be when you read about it in the textbook (1) before viewing the recorded lecture. The purpose of the textbook is to provide background for lectures, to be a resource for detailed explanations, to be a reference and a study guide, to offer practice problems, and to teach a robust problem-solving strategy.

The recorded lectures (2) will not simply regurgitate what you have read; rather, the purpose of the lectures is to be inspiring and stimulating, to clarify the textbook, to explain confusing issues, to urge you to think critically, to give you lots to think about and to spark further interest in the material. This is not a traditional approach. You must take notes (you may print the slides for taking notes) while viewing the recorded lecture to improve your comprehension and performance.

Important Note: Since the recorded lectures are from a prior year, the date of the assignment on the recorded video/slide may be a bit different from the assignment schedule. **Please follow strictly the due dates and times from the assignment schedule** posted on the course orientation module.

Lots of practice is required to become a proficient problem-solver. Roughly one day each week in the recorded lecture will be devoted to solving end-of-chapter exercises and problems (3). The problem-solving strategy used in these lectures will be the same as that used in every example exercise in the textbook.

To cap things off, you will demonstrate what you have learned by completing web-based graded exercises and problems (4) through MasteringPhysics. These activities will include self-tutoring problems and end-of-chapter problems.

COURSE SUPPLIES

- textbook: *Physics for Scientists and Engineers with Modern Physics*: *A Strategic Approach*, 5th edition, Randall D. Knight
- access to the MTU CANVAS learning management system
- access to the video conferencing tool ZOOM on another device with a camera (required for the final online proctored exam)
- student access code to MasteringPhysics
- scientific calculator (any type, including graphing and programmable)

I have enrolled our course in Pearson's Inclusive Access Program administered by our Campus Bookstore. All students enrolled in PH2200 will receive an access code via email that will enable them to open a MasteringPhysics account. This account will contain the eText version of our textbook. The account will expire at the end of the semester. Students who purchase the course materials through alternate means may opt out of the Inclusive Access Program. Students who remain in the program will be charged for the service on their bill issued by the University for tuition and fees. Please note that those who were enrolled in PH2100 this summer may already have an access code.

Accessing Canvas

Canvas is located at https://mtu.instructure.com/login . Your User ID is your campus email address without the @mtu.edu and, by default, your Password is the same as you use to access MTU e-mail. If you previously used Canvas and changed your password, your updated password is needed. If you have forgotten your password, contact the IT Help Desk at Michigan Tech (it-help@mtu.edu).

ASSESSMENT AT MICHIGAN TECH: UNIVERSITY STUDENT LEARNING GOALS

PH2200 supports students in achieving University Student Learning Goal #2: Knowledge of the Physical and Natural World. Specific student competencies for this goal can be found under the link for Goal #2 here: http://www.mtu.edu/assessment/program/university-learning-goals/

COURSE STRUCTURE

Grade

Your grade for PH2200 will be based on the total number of points that you earn on the various graded activities. The total possible score is 1029 points, broken down as follows:

Reading Quizzes (Canvas)	69
Graded Homework (MasteringPhysics)	170
Exam I (Canvas-LockDown browser)	210
Exam II (Canvas-LockDown browser)	210
Final Exam (CanvasLockDown browser+ZOOM proctoring)	350
MasteringPhysics Extra Credit	20
Total	1029

Letter grades for the course will be determined by total points earned in the following manner:

A	900-1029	C	700-749
AB	850-899	CD	650-699

B	800-849	D	600-649
BC	750-799	F	0-599

Reading Quizzes

Before viewing the recorded lecture/slide, you are required to complete a multiple-choice reading quiz question in Canvas. The quiz is intended to encourage you to read the relevant assignment before viewing the lecture. You need the LockDown browser to complete some reading quizzes. This can serve as a practice for using the LockDown browser in the exam. The reading assignments are located on the Assignment Schedule and will be found in the Course Details Module. You can also see them in the weekly class module. *Please note that all due dates are in the Eastern Time (ET) Zone.* Twenty-three 3-point reading quizzes will be given for a total of 69 points. **Please complete all the tasks in the weekly module in sequential order.**

Reading technical material is a skill that can be developed with practice. Read actively with questions in mind. A passive approach to reading physics wastes your time. Read with a pencil and paper beside your book and jot down questions and notes. Read to learn, not merely to cover material. Be sure to answer the *Stop to Think* questions that are sprinkled throughout each chapter - the answers with full explanations are located in the Answers section at the back of the book. Test your comprehension of a reading assignment by completing the related exercises in the Student Workbook. After completing the workbook exercises, you can approach the end-of-chapter exercises and problems with confidence.

Graded Homework (MasteringPhysics)

HOMEWORK GRADING POLICY: MasteringPhysics is a state-of-the-art online tutorial and homework system. We will use two types of exercises within MasteringPhysics: tutorial problems and end-of-chapter problems. The tutorial problems have extensive hints and subparts that you may request if you get stuck. The end-of-chapter problems are derived from problems in the textbook and typically have no hints. Your end-of-chapter problems will be unique due to the use of random numbers for some of the numerical parameters. For all types of problems, once you submit your answers, your work will be graded instantly. You will be permitted an unlimited number of submissions for each problem part, and there will be no deduction for an incorrect answer. There is no penalty for using the Hints. **Multiple-choice questions are graded specially:** to discourage guessing on multiple-choice questions, if a question has n choices, each incorrect answer results in a percent loss of $100/(n\text{-}1)$ for that question. This information is summarized in MasteringPhysics by clicking on the *Grading Policy* at the head of each assignment.

A total of 10 homework assignments from Mastering Physics will be assigned for grading. The point value of each assignment is shown in the list of assignments within MasteringPhysics; **the point total for all assignments is 170**. Each assignment must be completed by the due date and time (ET time zone) specified in the **Assignment schedule** as well as in **MasteringPhysics** for full credit. See the assignment schedule posted in the Course Orientation Module for the individual due dates in Mastering Physics. Partial credit will be awarded for late work as follows: A problem submitted between 0 and 24 hours after the deadline receives an amount of credit that decreases linearly from 100% to 50% depending on exactly when the problem was submitted. A problem submitted later than 24 hours after the deadline still receives 50% of possible credit. Please plan on submitting your answers well in advance of the deadline to avoid problems with the web.

The first (ungraded!) assignment is entitled *Introduction to Mastering Physics*. This initial assignment takes about 30 minutes to complete and consists of simple exercises to help you become familiar with the use of Mastering Physics. If you're new to MasteringPhysics, this first assignment should be completed before attempting the graded assignments.

MASTERINGPHYSICS REGISTRATION INSTRUCTIONS:

First-time users and students who took PH2100 last semester and used the Inclusive Access Program: Before you begin to register with MasteringPhysics, you need to obtain an **access code**. You can purchase a code from our campus bookstore or directly from the MasteringPhysics website, or you can obtain a code from the Inclusive Access Program.

To obtain a code from the Inclusive Access Program:

Starting on the homepage of our PH2200 course in Canvas, click on Course Details and then click on Inclusive Access in the Course Orientation module. On the ensuing page, click on Reveal Access Code, and then copy the access code.

Now that you have an access code, continue with the following instructions:

1. Go to https://mlm.pearson.com/northamerica/masteringphysics
2. Under Register, select **Student**.
3. Confirm you have the information needed, then select **OK! Register now**.
4. Enter your instructor's course ID: pati16565, and **Continue.**

Registration requires the following four items:

Course ID:	pati16565
Email Address:	please use your MTU email address
Student ID:	your M-number (with an uppercase M, but without the dash, for example, M12345678)
Access Code:	use the access code either supplied by the Inclusive Access Program or purchased from the bookstore or directly from MasteringPhysics

Prior users (students who took PH2200 previously and have an active MasteringPhysics account):

1. Go to https://mlm.pearson.com/northamerica/masteringphysics
2. Under Register, select **Student**.
3. Confirm you have the information needed, then select **OK! Register now**.
4. Enter your instructor's course ID: pati16565, and **Continue.**

After entering the Course ID (pati16565) and selecting **Continue**, enter your existing Pearson account username and password to Sign In.

To sign in later: 1. Go to https://mlm.pearson.com/northamerica/masteringphysics
2. Select **Sign In**.
3. Enter your Pearson account **username** and **password**, and **Sign In**.
4. Select the course name **PH2200 University Physics II-Electricity & Magnetism** to start your work

Pearson Higher Education Support: https://support.pearson.com/getsupport/s/contactsupport

Occasional problems arise with MasteringPhysics that are browser-related. If the graphics or the hints about a problem are missing, make sure your computer satisfies the system requirements located here: http://www.pearsonmylabandmastering.com/northamerica/masteringphysics/system-requirements/index.html

Mastering Physics allows you to rework completed problems after the due date. This work will not be saved and will not affect your grade. The feature may be useful as you review and rework the Mastering Physics problems as you study for the exams.

Exams and Final Exam

The two exams and the final exam are scheduled as follows:

Exam I	Friday, July 11, 2025 at 5:00 p.m.-7:00 p.m. (ET time zone)
Exam II	Friday, August 1, 2025 at 5:00 p.m.-7:00 p. m. (ET time zone)
Final Exam	Friday, August 8, 2025 at 5:00 p.m.-8:00 p. m. (ET time zone)

Exams I and II will be 120 minutes long. The final exam will be a comprehensive three-hour examination. All exams will be administered online through CANVAS using the *LockDown browser* at the scheduled time mentioned above.

Important: The final exam will be a proctored exam. It requires a video conferencing system (ZOOM). You need to have another device with Zoom preinstalled. You are required to open the Zoom with video ON before the 15 minutes of the exam; the TA and instructor should be able to see you and the table on which you are taking the exam. The Zoom link will be provided one week before the final exam. It is your responsibility to connect through Zoom before taking the final exam using the lockdown browser in Canvas. Your final exam score will not be counted unless you connect through Zoom before taking the final exam on CANVAS using Lockdown Browser.

All exams will be closed books and closed notes. You may print the PH2200 formula sheet that is posted in the CANVAS for use during exams. You will need a scientific calculator for the exams; however, equations may not be stored in calculators.

The exams will consist of a total of 30 conceptual questions and traditional problems; the final exam will consist of a total of 50 conceptual questions and problems. Both the **questions and problems will be multiple-choice**. The questions and problems will be similar to the *Stop to Think* questions and worked examples found in the textbook, the assigned end-of-chapter exercises and problems, the graded homework problems (MasteringPhysics), and questions and problems posed and answered in the recorded lecture.

It is your responsibility to appear at the scheduled times to take the online exams. If you want to take the exam at a **different time on the same scheduled date**, please contact Dr. Pati (patir@mtu.edu) one week before the exam date. **The scheduled date of the exam can not be changed. Since the final exam is a proctored exam, the timing of the exam can not be changed.**

There will be no curving, scaling, redemption, or any other adjustment of exam scores.

LockDown Browser requirement

This course requires the use of LockDown Browser for online exams. Watch this video to get a basic understanding of LockDown Browser:https://www.respondus.com/products/lockdown-browser/student-movie.shtml

Download Instructions

Download and install LockDown Browser from this link:

https://download.respondus.com/lockdown/download.php?id=561940847

Once Installed

- Start LockDown Browser
- Log in to Canvas
- Navigate to the exam

Note: You won't be able to access an exam that requires a LockDown Browser with a standard web browser. If this is tried, an error message will indicate that the test requires the use of LockDown Browser. Simply start LockDown Browser and navigate back to the exam to continue.

Guidelines for Online Exams

When taking an online exam, follow these guidelines:

- Select a location where you won't be interrupted for the stipulated time.
- Turn off all mobile devices, phones, etc., and don't have them within reach.
- Clear your area of all external materials - books, other computers, or devices
- Remain at your desk or workstation for the duration of the test.

- LockDown Browser will prevent you from accessing other websites or applications; you will be unable to exit the test until all questions are completed and submitted.
- For the final exam, which will be proctored through Zoom, you need to have another device with preinstalled Zoom. The zoom device also should be placed properly so that students and the environment (exam table) are noticeable to proctors.

ZOOM Requirement for Final Exam

A Zoom link will be provided to you one week before the Final exam. You need to preinstall Zoom on another device with a camera (you may use Zoom on your phone) and set up the device near the exam table for online proctors to see you and the environment while you are taking the exam. Please contact Michigan IT support (it-help@mtu.edu) if you have difficulty installing Zoom.

MasteringPhysics Extra Credit

You earn up to 20 additional points of extra credit by completing all of the assignments identified as Extra Credit in Mastering Physics. There are ten Extra Credit assignments, one for each chapter. Each of the ten Extra Credit assignments is worth 2 points. The Extra Credit is so labeled by chapter and is located in the assignment list below the 10 graded assignments in Mastering Physics. The Extra Credit assignments consist of tutorial problems with built-in hints. These extra credit points are included in total points and appropriately considered in the letter grading scheme.

Grade Tracking - Canvas

It's your responsibility to examine the grade book on Canvas periodically for accuracy and to report any discrepancies to Dr. Pati (patir@mtu.edu).

ADDITIONAL INFORMATION

Formula Sheet

The formula sheet posted in CANVAS may be used during your exams - no other formula sheet or table is allowed. Print the formula sheet and keep it by your side as you solve problems.

Assignment Schedule

The assignment schedule posted in the Course Orientation module should be strictly followed. You can print a copy for your reference.

Getting Help

TA: Kumar Neupane (e-mail: kumarn@mtu.edu)

Kumar can be reached by email.

ONLINE Coach: David Gordon (e-mail: djgordon@mtu.edu)

Students can book up to four 30-minute appointments per week with David, and appointments will be honored if booked no sooner than 12 hours in advance. Upon booking, students can find a link to a Google Meet attached to the Google Calendar invite.

Link for making the appointment with David: https://calendar.app.google/ZwnbpXHJjYXBA9hz8

Additional Help: Nathan Black (email:ndblack@mtu.edu)

Schedule appointment with Nathan through e-mail if you need additional help on problem solving.

Drop Dates

Drop date with no grade: July 2, 2025
Drop date with W grade: July 25, 2025

The University's Late Drop Policy is in place to protect the academic process. You must have extenuating circumstances that prohibit you from completing a course. The policy and procedure to late drop a course are located here: https://www.mtu.edu/deanofstudents/academic-policies/withdrawing/

Academic Dishonesty

New technologies engender new forms of cheating. Some known types of cheating and the actions that will result when cheating is identified are described below.

-Copying someone else's answers in MasteringPhysics or during the exam is considered cheating. MasteringPhysics as well as the lockdown browser include tools to help instructors identify cheating. In addition, the support staff for MasteringPhysics and the lockdown browser, if requested, will assist instructors in identifying cheating. MasteringPhysics will prohibit students identified as cheaters from using their websites.

Academic regulations and procedures are governed by University policy. Academic dishonesty cases will be handled by the University's policies.

Academic Integrity**:** http://www.mtu.edu/deanofstudents/policies-resources/integrity/

Disability Service and Affirmative Action

If you have a disability that could affect your performance in this online class or that requires an accommodation under the Americans with Disabilities Act, please inform your instructor as soon as possible (before the class begins on June 23) so that we can make appropriate arrangements.

Disability Service: http://www.mtu.edu/success/disability/students/policy/

The Affirmative Action Office has asked that you be made aware of the following:

Michigan Technological University complies with all federal and state laws and regulations regarding discrimination, including the Americans with Disabilities Act of 1990. If you have a disability and need reasonable accommodation for equal access to education or services at Michigan Tech, please call the Dean of Students Office at 487-2212. For other concerns about discrimination, you may contact your advisor, the Chair/Dean of your academic unit

Affirmative action program: http://www.mtu.edu/eo-compliance/pdfs/aapiwd.pdf

Equal Opportunity Statement**:** http://www.admin.mtu.edu/admin/boc/policy/ch5/

PH2200 Assignment Schedule Summer 2025

Assignments are taken from the textbook *Physics for Scientists and Engineers*, 5th edition, by Randall D. Knight
CQ denotes end-of-chapter conceptual questions from the textbook
E&P denotes end-of-chapter exercises and problems from the textbook
SW denotes suggested practice exercises found in the Student Workbook
MP denotes tutorial problems using MasteringPhysics

Date	Assignment (ET Time Zone)	Additional Practice and Extra Credit
Week 1		
June 23	Introduction and Orientation	
June 24	Read Chapter 22 Sections 1 – 4 (Reading Quiz Due : 12:30 PM)	SW Sections 22.1 – 22.4
June 25	Read Chapter 22 Sections 4 – 5 Read Chapter 23 Sections 1 – 2 (Reading Quiz Due : 12:30 PM)	SW Sections 22.4 – 22.5 SW Sections 23.1 – 23.2
June 26	Chapter 22 CQ 3, 5, 9, 13 E&P 2, 10, 15, 24, 30, 33, 43, 47, 67	MP Chapter 22: Extra Credit
June 27	Read Chapter 23 Sections 3 – 5 (Reading Quiz Due : 12:30 PM)	
Week 2		
June 29	**MasteringPhysics – Homework 1: Chapter 22; due 11:00 PM**	
June 30	Chapter 23 CQ 2, 4, 6, 8 E&P 1, 9, 14, 17, 18, 19, 24, 36, 50	MP Chapter 23: Extra Credit
July 1	Read Chapter 23 Sections 6 – 7 (omit example 23.9) Read Chapter 24 Sections 1 – 3 (Reading Quiz Due : 12:30 PM)	SW Sections 23.3 – 23.5
July 2	Chapter 23 CQ 13, 14 E&P 26, 28, 29, 34, 52, 54, 59,73	SW Sections 23.6 – 23.7 SW Sections 24.1 – 24.3
July 3	Chapter 24 CQ 2, 3, 4 E&P 1, 2, 3, 5, 6, 8, 11, 15, 16, 29, 30	MP Chapter 23: Extra Credit
July 4	Independence Day Recess	MP Chapter 24: Extra Credit
Week 3		
July 6	**MasteringPhysics – Homework 2: Chapter 23; due 11:00 PM**	
July 7	Read Chapter 24 Sections 4 – 6 (Reading Quiz Due : 12:30 PM)	SW Sections 24.4 – 24.6
July 8	Chapter 24 CQ 5, 7, 9, 10 E&P 17, 21, 22, 26, 31, 33, 35, 36, 44, 50	MP Chapter 24: Extra Credit
July 9	Read Chapter 25 Sections 1 – 3 Read Chapter 25 Sections 4 – 7 (Reading Quiz Due : 12:30 PM)	SW Sections 25.1 – 25.3 SW Sections 25.4 – 25.7
July 10	Chapter 25 CQ 3, 4, 7, 11 E&P 1, 6, 7, 9, 16, 23, 26, 31, 39, 56, 72 **MasteringPhysics - Homework 3: Chapter 24; due 11:00 PM**	MP Chapter 25: Extra Credit
July 11	**Exam I Chapters 22 – 24; 5:00 PM-7:00 PM; ET Time Zone**	
Week 4		
July 13	**MasteringPhysics – Homework 4: Chapter 24; due 11:00 PM**	
July 14	Read Chapter 26 Sections 1 – 4 (Reading Quiz Due : 12:30 PM)	SW Sections 26.1 – 26.4
July 15	Read Chapter 26 Sections 5 – 7 (Reading Quiz Due : 12:30 PM)	SW Sections 26.5 – 26.7
July 16	Chapter 26 CQ 1, 2, 8, 9, 11, 12 E&P 2, 9, 11, 17, 30, 32, 36, 45, 58, 60 Read Chapter 27 Sections 1 – 5 (Reading Quiz Due : 12:30 PM)	MP Chapter 26: Extra Credit SW Sections 27.1 – 27.5
July 17	Chapter 27 CQ 6, 7, 8, 9, 11 E&P 1, 5, 9, 14, 22, 24, 25, 37, 41 (a, b, d), 48, 62, 70 **MasteringPhysics – Homework 5: Chapter 25; due 11:00 PM**	MP Chapter 27: Extra Credit
July 18	Read Chapter 28 Sections 1 – 3 (Reading Quiz Due : 12:30 PM)	SW Sections 28.1 – 28.3

Date	Assignment	Additional Practice and Extra Credit
Week 5		
July 20	**MasteringPhysics – Homework 6: Chapter 26; due 11:00 PM**	
July 21	Read Chapter 28 Sections 4 – 6 (Reading Quiz Due : 12:30 PM)	SW Sections 28.4 – 28.6
July 22	Read Chapter 28 Sections 7 – 9 (Reading Quiz Due : 12:30 PM)	SW Sections 28.7 – 28.9
July 23	Chapter 28 CQ 4, 5, 8, 9, 10 E&P 2, 6, 13, 16, 21, 22, 31, 36, 59, 81 Read Chapter 29 Sections 1 – 3 (Reading Quiz Due : 12:30 PM)	MP Chapter 28: Extra Credit SW Sections 29.1 – 29.3
July 24	Read Chapter 29 Sections 4 – 6 (Reading Quiz Due : 12:30 PM) **MasteringPhysics – Homework 7: Chapter 28; due 11:00 PM**	SW Sections 29.4 – 29.6
July 25	Chapter 29 CQ 4, 5 E&P 6, 11, 12, 13, 17, 22, 25, 45, 49, 57	MP Chapter 29: Extra Credit
Week 6		
July 27	**MasteringPhysics – Homework 8: Chapter 29 Sections 1 – 6; due 11:00 PM**	
July 28	Read Chapter 29 Section 7 (Reading Quiz Due : 12:30 PM)	SW Sections 29.7
July 29	Read Chapter 29 Sections 8 – 10 (Reading Quiz Due : 12:30 PM)	SW Sections 29.8 – 29.10
July 30	Chapter 29 CQ 6, 8, 11 E&P 27, 28, 35, 36, 37, 38, 59, 71 Read Chapter 30 Sections 1 – 4 (Reading Quiz Due : 12:30 PM)	MP Chapter 29: Extra Credit SW Sections 30.1 – 30.4
July 31	Read Chapter 30 Sections 5 – 7 (Reading Quiz Due : 12:30 PM) **MasteringPhysics – Homework 9: Chapter 29 Sections 7 – 10; due 11:00 PM**	SW Sections 30.5 – 30.7
August 1	**Exam II Chapters 25 – 29; 5:00 PM-7:00 PM; ET Time zone**	
Week 7		
August 4	Chapter 30 CQ 1, 3, 7, 8 E&P 3, 8, 10, 11, 14, 15, 37, 46, 56, 59	MP Chapter 30: Extra Credit
August 5	Read Chapter 31 Sections 2 – 4 (Reading Quiz Due : 12:30 PM)	SW Sections 31.2 – 31.4
August 6	Read Chapter 31 Sections 5 – 7 (Reading Quiz Due : 12:30 PM) Chapter 31 CQ 7, 8, 10 E&P 7, 11, 18, 19, 20, 26, 43, 47	SW Sections 31.5 – 31.7 MP Chapter 31: Extra Credit
August 7	no class - prepare for final exam **MasteringPhysics – Homework 10: Chapter 30; due 11:00 PM**	
August 8	**Final Exam Chapters 22 – 31; 5:00 PM-8:00PM; ET Time Zone**	