

**OAKLAND UNIVERSITY, COLLEGE OF ARTS AND SCIENCES,  
DEPARTMENT OF PHYSICS**

**COURSE INFORMATION**

**PHY 1010-GENERAL PHYSICS I (WITH LAB), (CRN 41965)**

**PHY 1080-PRINCIPLES OF PHYSICS I (WITHOUT LAB) (CRN 41830)**

FALL 2020, ONLINE, 4.0 CREDIT HOURS

SEPTEMBER 8-DECEMBER 7 (EXAM WEEK DECEMBER 9-15)

**Course description:** Mechanics, heat, mechanical waves and sound. Topics include, **Mechanics:** *Linear Motion* in one and two dimensions; Newton's Laws of Motion and their applications to our everyday world; Mechanical Energy--potential and kinetic; Energy transfer; Work. *Rotational Motion. The Gravitational Field;* the Law of Universal Gravitation; Kepler's Laws of Planetary Motion; the Hydrogen atom. *Oscillatory Motion:* Harmonic Motion; Pendulum and Damped Oscillations. *Mechanical Waves:* Reflection and Transmission of Waves. **Thermodynamics:** Temperature and Kinetic Theory of Gases; Thermal Energy and Heat; the Laws of Thermodynamics and their applications. *For PHY 1010-General Physics I you must also be enrolled for the companion lab.*

**Course format:** fully online. Lectures and material asynchronous. Due dates will exist for homework assignments and activities. Midterm and final exams on specific dates and times.

**INSTRUCTOR INFORMATION**

**Name: Dr. Ilias Cholis**

**My ONLINE student hours** are on Mondays and Wednesdays 5:30-7:17 p.m. or by appointment.

**You can reach me** at 248-370-3417 or at [cholis@oakland.edu](mailto:cholis@oakland.edu)

**Prerequisites:** Score of 22 or higher on ACT math test or 550 or higher on SAT math test; or MTH 0662 or equivalent, or placement above MTH 0662.

**Co-requisite for PHY 1010:** PHY 1100 – General Physics Lab I.

**PHY 1010 (4 credits with Lab)** satisfies the university general education requirement in Natural Science and Technology knowledge exploration area.

**PHY 1080 (4 credits, no lab)** does **not** satisfy the university general education requirement.

**THE GOALS** of the course include becoming aware of basic concepts and principles of physics and learning to utilize mathematical methods to analyze physical situations. That covers the understanding of concepts and principles on a broad range of applications in other disciplines including, medicine, biology and engineering. Strong emphasis is given to conceptual learning, to strengthen the student's logical capacities.

To deepen the understanding of concepts, a number of tools will be used:

- **Online Homework** – this includes a mixture of active/guided examples, problems, conceptual questions and animated 'active' figures.
- **Online Activities-Questionnaires** – Simple everyday and conceptual activities-problems.
- **Laboratories (for PHY 1010 only)** – these include data-taking and analysis and serve to reinforce the understanding of fundamental concepts.

### **PROTECTING STUDENTS, FACULTY AND CAMPUS: IMPORTANT INFORMATION**

Students must comply with the University mandated health protocols. For face-to-face classes, students must wear face coverings in the class and keep 6 feet apart from each other and from the professor. Students who are unable to wear a face covering should provide documentation of this to the Dean of Students office. If a student refuses to comply with this classroom requirement, the student will be reported to the Dean of Students and not allowed to return to the face-to-face classroom environment until and appropriate face covering is used.

See the [Return to Campus website](https://www.oakland.edu/return-to-campus/) for up-to-date information. (URL: <https://www.oakland.edu/return-to-campus/>)

## **LEARNING OUTCOMES**

### **General Education Learning Outcomes for PHY 1010:**

The learning outcomes for Natural Science and Technology courses state that the student will demonstrate:

- Knowledge of major concepts from natural science or technology, including developing and testing of hypotheses; drawing conclusions; and reporting of findings through some laboratory experience or an effective substitute (Laboratory experiences are met by either a limited number of interactive experiences, collecting and interpreting raw data, or other effective experiences such as a virtual laboratory). Requires at least 3 laboratory experiences during the course.

- How to evaluate sources of information in science and technology.

In addition to the general-education learning outcomes, PHY 1010 also includes the crosscutting capacity of Critical Thinking.

Upon completion of the course the students will be able to:

- Utilize general methods of problem solving to sharpen their critical thinking capacity.
- Convert between systems of units and use these as an aid in problem solving.
- Add and subtract vectors graphically and be able to resolve them into components.
- Describe the motion of an object moving in one dimension.
- Describe the motion of an object moving along a curved path; apply kinematic equations.
- Construct free-body diagrams and use these to analyze mechanical systems using Newton's Laws of Motion.
- Analyze the motion of a satellite in a circular orbit, as well as other objects moving in circular paths.
- Utilize the principle of Conservation of Energy to solve problems, such as the motion of a roller coaster.
- Utilize the principle of Conservation of Linear Momentum to solve problems, such as a collision between two cars.
- Describe the motion of an object moving in a circular path using angular quantities.
- Apply Newton's Laws to circular motion and understand the concepts of torque, moment of inertia, and angular momentum.
- Understand the dynamics of a mass-spring system and an oscillating pendulum.
- Compare concepts of pressure and density in solids, liquids, and gases and apply to medical phenomena.
- Convert temperature readings in one scale to any other and apply concepts of specific heat and latent heat to thermal transfer situations.
- Analyze the behavior of gases utilizing the Ideal Gas Law.
- Apply the Laws of Thermodynamics to physical systems.
- Calculate the efficiency of any engine that utilizes heat transfer.

## **REQUIRED MATERIALS:**

Protractor, metric ruler, fine point retractable pencil, basic scientific calculator

## **TEXTBOOK:**

SERWAY/VUILLE: COLLEGE PHYSICS – 11<sup>TH</sup> EDITION. — REQUIRED

packaged with:

- WebAssign – Multi-term Access Card
  - Access to e-Book
  - Access to Student Study Guide and Solutions Manual
- Cengage Publishing – ISBN: 9781337741569

REQUIRED FOR PHY 1010:

Castoldi: General Physics Laboratory 1 – 4<sup>th</sup> edition

Kendall-Hunt Publishing – ISBN: 9781524920500

**Available options for purchasing the textbook:**

- You may purchase the entire ‘bundle’ at  
Campus bookstore – Barnes & Noble – at the Oakland Center
- You may purchase the ‘bundle’ online, directly from the publisher at
- <http://services.cengagebrain.com/course/site.html?id=4324223>

**Please notice:**

- The Access to Web Assign is valid for multiple terms (PHY 1010 & PHY 1020)
- If you wish to *purchase just the access to **WebAssign***, you may do so:
  - *Online* – once you are logged in to WebAssign.net  
Please see the page of the syllabus dedicated to WebAssign
  - *Bookstore*

**Library Resources:** The Kresge Library has two copies of the College Physics by Serway and Vuille. These copies are 2013 and 2015 editions and are available for **short term** checkout at the Service Desk. Students can check with the library for exact availability.

**Teaching Method:** This course will utilize the learner-centered method.

We will use a variety of activities which allow students with different learning styles and strengths to demonstrate what they are learning. Online activities include:

- short lecture, addressing the most difficult/least understood concepts, and including visual materials and demonstrations
- problem-solving tasks
- activities relating physics to everyday life

Clearly, this requires **staying in course** to the online lectures and *completing the homework, online activities on time*, but also **paying attention to the recorded**

**lectures** and **asking questions during the online office hours or by email**. Please remember that there will be **no 'extra credit'** for making-up missed activities, homework assignments.

**Online Lecture Slides:** Lecture Slides for each chapter are posted on Moodle. Together with your personal notes the slides should be used as a study guide and are not intended to substitute the textbook.

You can print these – for example six per page – and use them for note taking.

**Study Tips:** In order to develop **Critical Thinking**, one of the main goals of this course, much emphasis in this class will be on the understanding and assimilation of 'concepts'.

You are encouraged to review the chapter's *Active Examples* on the textbook and the animated *Active Figure* tutorials on the e-book.

In order to test your understanding of concepts, you should test yourself by trying all the *Quick Quizzes* interspersed in each chapter (answers to be found at the end of the textbook) and the end-of-chapter Conceptual Questions.

Ideally, you could find one or two partners in the class and work with them at least once a week for a few hours outside class time.

**Conceptual questions will be included in the Exams**

**Supplemental Instruction:** Supplemental Instruction (SI) is provided by the Tutoring Center. SI will meet for an hour after each lecture as a support for the students.

The SI leader is a student, who will provide and discuss extra problem, review difficult concepts, and answer any questions about current and/or past material.

SI will also allow you to work in a smaller environment than our large class.

Please be aware that the SI leader will not solve the homework for you.

Participation to the SI is not mandatory, but it is strongly encouraged.

If you missed a session, you can find on eSpace study material that is regularly posted by the SI instructor.

**Other Help:** The **Tutoring Center** offers free individual and group peer tutoring and also space to gather and study with peers.

A series of short videos providing a complete review of High School Algebra and Trigonometry can be found on the Tutoring Center's website:

**[wwwp.oakland.edu/tutoring/study-aids/physics-videos](http://wwwp.oakland.edu/tutoring/study-aids/physics-videos)**

Here you will also find videos of solved sample problems for each chapter of the entire textbook.

Last but not least, you may meet me during **office hours** (or request a special appointment) to get help with course material, discuss ways of improving your performance, but also to get known personally by the instructor.

**TECHNOLOGY HELP:**

- For help using Moodle, use the Get Help link at the top of the Moodle page ([moodle.oakland.edu](https://moodle.oakland.edu)).
- For access to technology and in-person assistance, call or visit the [Student Technology Center](https://www.oakland.edu/stc/) (Link to Student Technology Center: <https://www.oakland.edu/stc/>).
- For general technology assistance, consult the [OU Help Desk](https://www.oakland.edu/helpdesk/) (Link to Help Desk: <https://www.oakland.edu/helpdesk/>).

**RESPECT RULES OF NETIQUETTE**

- Identify yourself. Begin messages with a greeting and close with your name.
- Respect your peers and their privacy.
- Use professional, respectful language. Do not swear, use profanity or other inappropriate language.
- Avoid sarcasm, which can be misinterpreted and cause hurt feelings.

**Math Review:** Good Math skills are an essential pre-requisite for a Physics course. During the first week of classes you are requested to view the following **five Math videos** that are posted on Moodle. The videos summarize the essential math required for the course:

- Ratios, Proportions and Units
- Powers, Roots and Scientific Notation
- Equations and Graphing
- Geometry and Trigonometry
- Significant Figures

Another set of math review videos that you may want to view during the course, also available on Moodle, are:

- Equations Involving Fractions
- Systems of Equations
- Interpreting Graphs
- Area Under a Curve
- Exponentials and Logarithms
- Limits and Instantaneous Velocity
- Angle Basics

- Waves and Superposition
- Simple Harmonic Motion

Three videos on 'How to use the Calculator' are also available, to clarify common mistakes made when entering equations in a scientific calculator:

- Orders of Operations
- Radian versus Degree
- Scientific Notation

**Homework:** The online program **WebAssign** will be utilized for entering and automatic grading of the homework. This requires the Access Card to be found inside the textbook.

The homework for each chapter can be submitted **a maximum of 5 times**.

**Accessing WebAssign:** see attached sheet.

**Due time:** The assignments are due at 11:59 pm on the date specified on WebAssign. Only in case of serious circumstances an extension may be granted. Please send me an e-mail at *cholis@oakland.edu* about this **before** the deadline.

Grace period: there is a 14-day grace period in WebAssign during which you may do the homework even if you do not have an Access Code yet.

An **Algebra Review** tool is also available on WebAssign. It provides students with a self-paced environment for extra practice with the mathematical skills required for success in the physics course.

**The homework is worth 20% of the final grade.**

**Online Activities:** There will be online activities administered through the program **WebAssign**

These may include: Hands-on Activities, Quizzes, and Conceptual Questions.

**The activities are worth 15% of the final grade.**

**Laboratories: PHY 1010** includes a laboratory experience (PHY1100 class with its own credit) aimed at introducing the students to the scientific method of investigation of physics phenomena and principles. The laboratory meets weekly for 2 ½ hours and consist of two introductory exercises and ten experiments to be performed in groups of three students. There will be a midterm and a final quiz. Detailed information is provided on a syllabus which will be distributed at the labs. Purchase of the Lab Manual is required.

Attendance to all lab sessions is mandatory.

Location: **Rooms HHS 110 & 120.**

**No Lab experience is required for PHY 1080 students.**

**Exams:** There will be a total of three exams, with multiple choice problems and conceptual questions. The first two will be midterms the third the final. You must show your work or no full credit will be given. Notice that clear writing is a very important component of the exams. All exams are open book. A calculator is required.

Exam # 1: Chapters 1, 2, 3, 4

Exam # 2: Chapters 5, 6, 7, 8,

Exam #3 (FINAL): Chapters 10, 11, 12

**The two midterms and the final exam are worth 65% of the final grade in total. Ex 1: 20.0%, Ex2: 20.0%, Ex3 (Final) : 25%**

**Make-up Policy:** In order to be fair to the majority of students who take the exams on time the general policy is: No make-up exams will be given. A score of zero will be entered for missed a test. If you cannot be present for an exam due to documentable serious and unavoidable circumstances, contact me before the exam, if possible, or as quickly as possible after the exam to see if an exception can be made.

**Grading:** Course grades will be posted on Moodle.

<b>Homework</b>	<b>20.0%</b>
<b>Activities</b>	<b>15.0%</b>
<b>Exam 1</b>	<b>20.0%</b>
<b>Exam 2</b>	<b>20.0%</b>
<b>Exam 3 (Final)</b>	<b>25.0%</b>

**Grading Scale:**

<b>A</b>	<b>96-100</b>
<b>A-</b>	<b>90-95</b>
<b>B+</b>	<b>85-89</b>
<b>B</b>	<b>80-84</b>
<b>B-</b>	<b>75-79</b>
<b>C+</b>	<b>70-74</b>
<b>C</b>	<b>65-69</b>
<b>C-</b>	<b>60-64</b>
<b>D+</b>	<b>55-59</b>
<b>D</b>	<b>50-54</b>
<b>F</b>	<b>&lt; 50</b>



# CLASSROOM AND UNIVERSITY POLICIES

## STUDENT CONDUCT

1. **IN-CLASS BEHAVIOR.** Be respectful of other students during class. If you arrive to class tardy, please enter the classroom as quietly as possible. Cell phone usage will not be tolerated during class for any reason. Refrain from talking while someone has the floor but please do not hesitate to participate when questions are asked. **Students are not permitted to take notes or record lectures for the purpose of sale.**  
**PLAGIARISM.** Plagiarism will not be tolerated. Although you will be working in groups for many activities, you are required to do writing assignments independently and to acknowledge assistance where appropriate. Copying each other's written work will be considered plagiarism and will result in being referred to the Academic Conduct Committee.
2. **ACADEMIC CONDUCT POLICY.** All members of the academic community at Oakland University are expected to practice and uphold standards of academic integrity and honesty. Academic integrity means representing oneself and one's work honestly. Misrepresentation is cheating since it means students are claiming credit for ideas or work not actually theirs and are thereby seeking a grade that is not actually earned. Following are some examples of academic dishonesty:
  - a. **Cheating.** This includes using materials such as books and/or notes when not authorized by the instructor, copying from someone else's paper, helping someone else copy work, substituting another's work as one's own, theft of exam copies, falsifying data or submitting data not based on the student's own work on assignments or lab reports, or other forms of misconduct on exams.
  - b. **Falsifying records** or providing misinformation regarding one's credentials.
  - c. **Unauthorized collaboration** on computer assignments and unauthorized access to and use of computer programs, including modifying computer files created by others and representing that work as one's own.

For more information, review OU's [Academic Conduct Regulations](https://www.oakland.edu/deanofstudents/policies/). (Link to Academic Conduct Regulations: <https://www.oakland.edu/deanofstudents/policies/>)

### **Academic Integrity confirmation statement for students taking this course.**

*"I pledge that all work I do in the course and on my assignments and tests are my own work and I received no unauthorized assistance. I also understand that if I am unclear about the appropriate or allowable use of any support materials to complete my required coursework, I will contact the faculty for clarification before using said materials.*

*All alleged violations of Academic Misconduct will be reported to the Academic Conduct Committee. Any students found responsible for violations of Academic Misconduct will be subject to disciplinary measures by the University up to and possibly including expulsion (permanent separation) from the University."*

2. **BEHAVIORAL CODE OF CONDUCT.** Appropriate behavior is required in class and on campus. Disrespectful, disruptive and dangerous behavior are not conducive to a positive learning environment and may result in consequences. Core Standards for Student Conduct at OU includes
- a. **Integrity.** See academic conduct policy points above.
  - b. **Community.** Policies regarding disruptive behavior, damage and destruction, weapons, and animals.
  - c. **Respect.** Policies regarding harassment, hazing, and [sexual misconduct](#) (Link to Sexual Misconduct policy: <https://www.oakland.edu/policies/health-and-safety/625/>)
  - d. **Responsibility.** Policies regarding alcohol, drugs, and other substances  
See the [Student Code of Conduct](#) for details. (Link to Student Code of Conduct: <https://www.oakland.edu/deanofstudents/student-code-of-conduct/>)

## **ACCOMMODATION AND SPECIAL CONSIDERATIONS**

Oakland University is committed to providing everyone the support and services needed to participate in their courses. Students with disabilities who may require special accommodations should make an appointment with campus [Disability Support Services](#) (DSS). If you qualify for accommodations because of a disability, please submit to your professor a letter from Disability Support Services in a timely manner (for exam accommodations provide your letter at least one week prior to the exam) so that your needs can be addressed. DSS determines accommodations based on documented disabilities. Contact DSS at 248-370-3266 or by e-mail at [dss@oakland.edu](mailto:dss@oakland.edu). The office of DSS office is located in room 103A North Foundation Hall.

For information on additional academic support services and equipment, visit the [Study Aids](#) webpage of Disability Support Services website. (Link to Disability Support Services website: <https://www.oakland.edu/dss/>).

## **ATTENDANCE POLICY**

*There are no scheduled makeup labs or exams or homework activities.* In the event that you miss an exam/quiz, I reserve the right to issue an alternative assignment/exam or to drop that score from your average. This will be handled on a case-by-case basis.

## **EXCUSED ABSENCE POLICY**

This policy for university excused absences applies to participation as an athlete, manager or student trainer in NCAA intercollegiate competitions, or participation as a representative of Oakland University at academic events and artistic performances approved by the Provost or designee. A student must notify and make arrangements with the professor in advance. For

responsibilities and procedures see [Academic Policies and Procedures](https://www.oakland.edu/provost/policies-and-procedures/). (Link to Academic Policies and Procedures: <https://www.oakland.edu/provost/policies-and-procedures/>)

## **RELIGIOUS OBSERVANCES**

Student should discuss with professor at the beginning of the semester to make appropriate arrangements. Although Oakland University, as a public institution, does not observe religious holidays, it will continue to make every reasonable effort to help students avoid negative academic consequences when their religious obligations conflict with academic requirements. See The [OU Diversity Calendar](https://www.oakland.edu/diversity/calendar/) for more information. (Link to calendar: <https://www.oakland.edu/diversity/calendar/>)

## **BEREAVEMENT POLICY**

In the event of the death of certain members within families or among loved ones, the University grants necessary bereavement absences upon student request. For the official bereavement policy, see: <https://www.oakland.edu/provost/policies-and-procedures/>

## **PREFERRED NAME POLICY**

The University recognizes that as a community many of its members use names other than their legal names to identify themselves. As long as the use of this different name is not for the purposes of misrepresentation, or a legal name is required by the University business, policy or legal need, the University acknowledges that a “preferred name” will be used whenever possible. The University reserves the right to not accept a preferred name if it is deemed inappropriate, including a preferred name that is vulgar, offensive, fanciful, or creates confusion with another person. [OU’s Preferred Name Policy](#) ensures a student’s university records can use a name that reflects the student’s identity (abbreviated name, name change etc.).

## **SEXUAL MISCONDUCT**

Faculty and staff are responsible for creating a safe learning environment for our students, and that includes a mandatory reporting responsibility if students share information regarding sexual misconduct/harassment, relationship violence, or information about a crime that may have occurred on campus with the University. In such cases, the professor will report information to the campus’ Title IX Coordinator (Chad Martinez, [chadmartinez@oakland.edu](mailto:chadmartinez@oakland.edu) or 248-370-3496). Students who wish to speak to someone confidentially can contact the OU Counseling Center at 248-370-3465. Additionally, students can speak to a confidential source off-campus 24 hours a day by contacting Haven at 248-334-1274.

## **ADD/DROPS**

The university policy will be explicitly followed. It is the student’s responsibility to be aware of [deadline dates for dropping courses](#) and officially drop the course. (Link to deadlines for dropping courses: <https://www.oakland.edu/registrar/registrar/dropornot/>)

## **EMERGENCY PREPAREDNESS**

In the event of an emergency arising on campus, the Oakland University Police Department (OUPD) will notify the campus community via the emergency notification system. The professor of your class is not responsible for your personal safety, so therefore it is the responsibility of each student to understand the evacuation and “lockdown” guidelines to follow when an emergency is declared. These simple steps are a good place to start:

- OU uses an emergency notification system through text, email, and landline. These notifications include campus closures, evacuations, lockdowns and other emergencies. Register for these notifications at [oupolice.com](http://oupolice.com).
- Based on the class cellphone policy, ensure that one cellphone is on in order to receive and share emergency notifications with the professor in class.
- If an emergency arises on campus, call the OUPD at (248) 370-3331. Save this number in your phone, and put it in an easy-to-find spot in your contacts.
- Review protocol for evacuation, lockdown, and other emergencies via the classroom’s red books (hanging on the wall) and [oupolice.com/emergencies](http://oupolice.com/emergencies).
- Review with the professor and class what to do in an emergency (evacuation, lockdown, snow emergency).

**Violence/Active Shooter:** If an active shooter is in the vicinity, call the OUPD at (248) 370-3331 or 911 when it is safe to do so and provide information, including the location and number of shooter(s), description of shooter(s), weapons used and number of potential victims. Consider your options: [Run, Hide, or Fight](#).



## WebAssign: How to Get Started

### Day One: Register

1. Go to <https://webassign.net> and click on **LOGIN**.
2. Click on **'Enter Class Key'**
3. Enter the **Class Key: oakland 5872 7676**
4. Enter your chosen Login name and the required information
5. Click on **'Create my Account'**  
A review screen will appear with your Username, Institution code & Password.  
Print and retain a copy of this information.
6. Once you Login, you need to enter the **WebAssign Access Code**.
  - If you purchased a new textbook, the Access Code card is inside the book.
  - If you purchased a used book, you may choose to purchase the Access Code online.
7. Once you have logged in, you will see the **Homepage**.
  - I suggest you click on **Guide** (upper right corner) and read the **Student Guide**.
  - For **Technical Support** call **800-354-9706** or go to <https://www.webassign.com/support/student-support/>

***Notice: there is a 14-day grace period in Web Assign during which you may do the homework even if you do not have an Access Code.***

***You may want to watch the short Student Self-Enrollment video:***

[http://www.wadsworthmedia.com/tlc/EWA\\_StudentVideos/Self\\_Enrollment/EWA\\_Student\\_SelfEnrollment.html](http://www.wadsworthmedia.com/tlc/EWA_StudentVideos/Self_Enrollment/EWA_Student_SelfEnrollment.html)

### To access the Homework:

1. Go to <https://www.webassign.net/wa-auth/login> (I suggest you Bookmark this page)
2. After you Login, click on **'My Assignments'**. Please notice:
  - You may save your work without grading by clicking on **'Save Work'** at the end of the question. Next time you access the assignment, your work will still be available.
  - WebAssign will not automatically submit your answer if you only 'Save' your work. Make sure you **'Submit'** it before the due date and time.
  - You may also choose to **'Submit New Answers to Question xx'** or **'Submit All New Answers'**
  - Remember that there is a **maximum of 5 submissions** for each problem.

## TENTATIVE COURSE SCHEDULE

Monday	Wednesday
	09/09 Chapter 1, Introduction
09/14 Chapter 1, Introduction	09/16 Chapter 2 Kinematics – 1 Dim. (Ch 1 due on Friday 9/18)
09/21 Chapter 2 Kinematics – 1 Dim.	09/23 Chapter 3 Kinematics – 2 Dim. (Ch 2 due on Friday 9/25)
09/28 Chapter 3 Kinematics – 2 Dim.	09/30 Chapter 4 Laws of Motion (Ch 3 due on Friday 10/02)
10/05 Chapter 4 Laws of Motion	10/07 Chapter 4 Laws of Motion & Chapter 5 Work & Energy (Ch 4 due on Friday 10/09)
10/12 Chapter 5 Work & Energy	10/14 <b>EXAM 1 (Ch 1-4)</b>
10/19 Chapter 5 Work & Energy & Chapter 6 Momentum	10/21 Chapter 6 Momentum (Ch 5 due on Friday 10/23)
10/26 Chapter 6 Momentum & Chapter 7 Rotational Motion	10/28 Chapter 7 Rotational Motion (Ch 6 due on Friday 10/30)
11/02 Chapter 7 Rotational Motion & Chapter 8 Rotational Dynamics	11/04 Chapter 8 Rotational Dynamics (Ch 7 due on Friday 11/06)

Monday	Wednesday
11/09 Chapter 8 Rotational Dynamics & Chapter 10 Thermal Physics (Ch 8 due on Tuesday 11/10)	11/11 <b>EXAM 2 (Ch 5-8)</b>
11/16 Chapter 10 Thermal Physics	11/18 Chapter 10 Thermal Physics & Chapter 11 Energy in Thermodynamics (Ch 10 due on Friday 11/20)
11/23 Chapter 11 Energy in Thermodynamics	11/25 Chapter 11 Energy in Thermodynamics Chapter 12 Laws of Thermodynamics (Ch 11 due on Friday 11/27)
11/30 Chapter 12 Laws of Thermodynamics	12/02 Chapter 12 Laws of Thermodynamics
12/07 Chapter 12 Laws of Thermodynamics (Ch 12 due on 12/07)	
12/14 <b>EXAM 3, FIINAL (Ch 10-12)</b> <b>7:00-10:00 pm (tentative but not</b> <b>finalized) Actual date TBD</b>	