PHY 1510 – INTRODUCTORY PHYSICS I

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PHY 1610 – FUNDAMENTALS OF PHYSICS I

COURSE INFORMATION

PHY 1510, CRN 12524 & PHY 1610, CRN 12525

Term: Winter 2020

Classroom: HHS 195

Meeting days/time: MWF 12:00-1:07 PM

Final Exam: April 22, 12:00-3:00 PM

Course (catalog) description: Classical mechanics and thermodynamics. For science, mathematics and engineering students.

Prerequisites: Score of 28 or higher on ACT mathematics exam; or score of 660 or higher on SAT mathematics exam; or MTH 1441 or equivalent; or MTH 1331 and MTH 1332; or placement above MTH 1441. MTH 1554 recommended.

Co-requisite for PHY 1510: PHY 1010 – General Physics Lab

PHY 1510 and PHY 1100 together satisfy the university general education requirement in the natural science and technology (NST) knowledge exploration area.

PHY 1610 does not satisfy the university general education requirement in the natural science and technology (NST) knowledge exploration area.

Course format: On-campus meetings

PROFESSOR INFORMATION

Name: Dr. Vasyl Tyberkevych

Office location: HHS 274

My student hours (office hours) are MW 1:30-2:30 PM or by appointment

You can reach me at (248) 370-3421 or at tyberkev@oakland.edu

Email policy: Email is the best way to contact me. I will make every effort to return your email within 24 hours.
GENERAL EDUCATION LEARNING OUTCOMES (FOR PHY 1510)

The learning outcomes for NST 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 and some laboratory experience or an effective substitute.
- How to evaluate sources of information in science and technology.

LEARNING OUTCOMES

By the end of the course students will be able to:

- Perform conversion of units, express results of calculations using correct units and correct number of significant figures
- Find magnitude of a vector, angle between two vectors, add, subtract, and multiply vectors
- Apply kinematic relations between position, velocity, and acceleration to describe object’s motion in one and two dimensions
- Identify forces acting on an object and apply Newton’s Laws to find the acceleration and trajectory of motion of an object
- Find the work done by a force and find kinetic and potential energy of an object
- Solve problems involving conversion of potential and kinetic energies
- Apply momentum conservation law to find the outcome of collisions
- Find center of mass and total momentum of a system of particles
- Find angular velocity, acceleration, torque, and rotational kinetic energy of a rigid object
- Find moment of inertia and angular momentum of a rotating rigid object
- Describe motion of objects in orbits such as planets and satellites using Newton’s and Kepler’s laws
- Mathematically describe simple harmonic motion in oscillating systems
- Find the oscillation frequency of a pendulum or a mass on a spring
- Apply Pascal’s law and Archimedes’s principle to find the pressure and forces in hydrostatic problems
- Apply the ideal gas law to find the temperature, pressure, and volume of gas
- Apply find law of thermodynamics to find work and heat transfer in simple thermodynamic processes
- Find thermal efficiency of a Carnot engine
TEXTBOOKS AND MATERIALS

TEXTBOOK

- Serway/Jewett, Principles of Physics, 5th edition, Hybrid – Cengage
  Bundled with WebAssign (multi-term)
  ISBN: 9781305586871 (required)
- For students who choose just WebAssign and e-book:
  Access Card to Enhanced WebAssign (multi-term)
  ISBN: 9781285858418 (required)
- Gordon/McGrew/Serway, Student Solutions Manual with Study Guide, Volume 1
  ISBN: 9781133110767 (optional)

WEBASSIGN

- The online program WebAssign (www.webassign.net) will be used for all homework assignments
- Use of WebAssign requires the Access Card (purchased with the textbook)
- WebAssign Class Key: oakland 4671 3553
- See attached sheet for detailed access instructions

MOODLE

- Some of the materials associated with class (e.g., lecture slides and exam problem solutions) will be disseminated through Moodle (moodle.oakland.edu)

ASSIGNMENTS

<table>
<thead>
<tr>
<th>Homework (20%)</th>
<th>Tests (45%)</th>
<th>Final Exam (35%)</th>
</tr>
</thead>
</table>

Homework (20 %)

- The online program WebAssign (www.webassign.net) will be utilized for entering and automatic grading of the homework. This requires the Access Card to be found inside the textbook. See attached sheet for detailed instructions on WebAssign access
- The assignments are due each Wednesday at 11:59 PM (except the Winter recess week)
- Each homework assignment can be submitted a maximum of 5 times
- No e-mailed homework is accepted
Tests (45 %)
- There will be 3 in-class tests, each worth 15 % of the final grade
- The tests will be closed-book. You may bring several (up to 5) letter-size sheets containing hand written formulas and notes. You may not share your notes with anyone else
- You will need to bring a scientific calculator, pencil or pen, and blank paper
- No makeup tests will be given for any reason

Final Exam (35 %)
- The final exam is on April 22, from 12:00 PM to 3:00 PM, in the same room (HHS 195)
- The final exam will follow the same rules as the midterm tests

Grading
- A: Comprehensive, thorough coverage of all objectives, required content, critical and higher-level thinking, original and creative, sound use of English skills, both written and oral
- B: Competent, mastery of basic content and concept, adequate use of English
- C: Slightly below average work, has met minimum requirements but with difficulty
- D: Has not met requirements of assignment/course, has significant difficulties in many areas
- F: Has not completed requirements; has not officially withdrawn from course before drop date

Grading Scale

<table>
<thead>
<tr>
<th>Letter Grade</th>
<th>Minimum %</th>
<th>Numerical Equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>95</td>
<td>4.0</td>
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<tr>
<td>A–</td>
<td>90</td>
<td>3.7</td>
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<tr>
<td>B+</td>
<td>85</td>
<td>3.3</td>
</tr>
<tr>
<td>B</td>
<td>80</td>
<td>3.0</td>
</tr>
<tr>
<td>B–</td>
<td>75</td>
<td>2.7</td>
</tr>
<tr>
<td>C+</td>
<td>70</td>
<td>2.3</td>
</tr>
<tr>
<td>C</td>
<td>65</td>
<td>2.0</td>
</tr>
<tr>
<td>C–</td>
<td>60</td>
<td>1.7</td>
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<tr>
<td>D+</td>
<td>55</td>
<td>1.3</td>
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<tr>
<td>D</td>
<td>50</td>
<td>1.0</td>
</tr>
<tr>
<td>F</td>
<td>&lt; 50</td>
<td>0.0</td>
</tr>
</tbody>
</table>
**LABS**

Students registered for PHY 1510 must also register for the General Physics Lab course PHY 1100. The labs are coordinated by Prof. K.C. Castoldi ([castoldi@oakland.edu](mailto:castoldi@oakland.edu), HHS 162, (248) 370-4870). PHY 1100 is a completely independent course and all questions regarding the labs should be addressed to Prof. Castoldi.

**SUPPLEMENTAL INSTRUCTION (MWF, 1:20-2:20 PM)**

Supplemental instruction is *not* a required part of the course. Instead it is a group tutor service offered by the Academic Skills Center.

**USING MOODLE AND OTHER TECHNOLOGIES**

**USING MOODLE**

- Some of the materials associated with class will be disseminated through Moodle (e.g., lecture slides and exam problem solutions). Students should ensure they have access to Moodle ([moodle.oakland.edu](http://moodle.oakland.edu)).

**IN-CLASS TECHNOLOGY POLICY**

- You are welcome to bring laptops, tablets, and cell phones to class. Please make sure to turn phones on silent or vibrate. Please use these devices only for note taking or for activities I ask you to engage in during class. See the Professionalism/Civility Policy regarding misuse of these technologies.

**TECHNOLOGY BACK-UP PLAN**

- In the event that your computer crashes or internet goes down, it is essential to have a “backup plan” in place where you are able to log in using a different computer or travel another location that has working internet.

- Any files you intend to use for your course should be saved to a cloud solution (Google Drive, Dropbox, etc.) and not to a local hard drive, USB stick or external disk. Saving files this way guarantees your files are not dependent on computer hardware that could fail.
TECHNOLOGY HELP

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

RESPECT RULES OF NETIQUETTE

- Respect your peers and their privacy.
- Use constructive criticism.
- Refrain from engaging in inflammatory comments.

CLASSROOM AND UNIVERSITY POLICIES

CLASSROOM BEHAVIOR

1. **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. **Plagiarizing the work of others.** Plagiarism is using someone else’s work or ideas without giving that person credit; by doing this, students are, in effect, claiming credit for someone else’s thinking. Both direct quotations and paraphrases must be documented. Even if students rephrase, condense or select from another person’s work, the ideas are still the other person’s, and failure to give credit constitutes misrepresentation of the student’s actual work and plagiarism of another’s ideas. Buying a paper or using information from the World Wide Web or Internet without attribution and handing it in as one’s own work is plagiarism.
c. **Falsifying records** or providing misinformation regarding one's credentials.
d. **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/).

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](https://www.oakland.edu/policies/health-and-safety/625/)
   d. **Responsibility.** Policies regarding alcohol, drugs, and other substances

   See the [Student Code of Conduct](https://www.oakland.edu/deanofstudents/student-code-of-conduct/) for details.

**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)](https://www.oakland.edu/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.

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

**Mental Health and Well-Being**

Oakland University is committed to advancing the mental health and well-being of its students. If you or someone you know is feeling overwhelmed, depressed, and/or in need of support, services are available. For help, contact The OU Counseling Center at Graham...
Health at (248) 370-3465. Student resources can also be found at the Dean of Students website by clicking on Student Health & Safety Resources. (URL: http://www.oakland.edu/deanofstudents)

ATTENDANCE POLICY

Attendance is expected but not required. There are no scheduled makeup exams and no makeup assignments will be given. If you must miss a class due to an emergency, notify me as soon as possible, but not later than 24 hours after the missed class.

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. (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 for more information. (Link to calendar: https://www.oakland.edu/diversity/calendar/)

PREFERRED NAME AND PRONOUN

If you do not identify with the name that is listed with the registrar's office, please notify me so that I may appropriately amend my records. In addition, if you prefer to go by a different pronoun, please inform me. For more information including a preferred first name on university records please review OU’s Preferred Name Policy (URL: https://www.oakland.edu/uts/common-good-core-resources/name-services/)

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 or 248-370-3496). You can report such incidents to the Dean
of Students Office directly. 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. The Dean of Students website provides more information on your options and support services. (https://www.oakland.edu/deanofstudents/sexual-assault-and-violence-initiative/students/)

ADD/DROPS

As a student, university policy officially gives you the responsibility to add and drop courses. Put in your calendar deadline dates for dropping courses (even if you think it won’t be necessary), and consult the Drop or Not Guide to make a well-informed decision before dropping a course. (https://www.oakland.edu/registrar/registration/dropornot/)

FACULTY FEEDBACK: OU EARLY ALERT SYSTEM

As a student in this class, you may receive “Faculty Feedback” in your OU e-mail if your professor identifies areas of concern that may impede your success in the class. Faculty Feedback typically occurs during weeks 2-5 of the Fall and Winter terms, but may also be given later in the semester and more than once a semester. A “Faculty Feedback” e-mail will specify the area(s) of concern and recommend action(s) you should take. Please remember to check your OU email account regularly as that is where it will appear. This system is to provide early feedback and intervention to support your success. (Link to Faculty Feedback for students: https://www.oakland.edu/advising/faculty-feedback/)

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.
- 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.
• 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.
# Tentative Course Schedule

<table>
<thead>
<tr>
<th>Week</th>
<th>Day</th>
<th>Date</th>
<th>Lecture Topics</th>
<th>Chapters</th>
<th>HW</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>M</td>
<td>Jan 06</td>
<td>Overview of the course. Physical units. Significant figures.</td>
<td>1.1-1.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>W</td>
<td>Jan 08</td>
<td>Coordinate systems. Vectors and scalars.</td>
<td>1.6-1.9</td>
<td></td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>Jan 10</td>
<td>Motion in one dimension. Displacement, velocity, acceleration.</td>
<td>2.1-2.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>Jan 13</td>
<td>Motion in one dimension. Motion under constant acceleration. Freely falling objects.</td>
<td>2.6-2.7</td>
<td></td>
</tr>
<tr>
<td></td>
<td>W</td>
<td>Jan 15</td>
<td>Motion in two dimensions. Projectile motion.</td>
<td>3.1-3.3</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>Jan 17</td>
<td>Motion in two dimensions. Circular motion.</td>
<td>3.4-3.6</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>M</td>
<td>Jan 20</td>
<td>No classes – Martin Luther King, Jr. Day</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>W</td>
<td>Jan 22</td>
<td>Newton's First Law. Force and mass.</td>
<td>4.1-4.3</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>Jan 24</td>
<td>Newton's Second Law.</td>
<td>4.4-4.5</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>M</td>
<td>Jan 27</td>
<td>Newton’s Third Law. Applications of Newton's Laws.</td>
<td>4.6-4.7</td>
<td></td>
</tr>
<tr>
<td></td>
<td>W</td>
<td>Jan 29</td>
<td>Friction.</td>
<td>5.1, 5.4</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>Jan 31</td>
<td>Circular motion.</td>
<td>5.2-5.3</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>M</td>
<td>Feb 03</td>
<td>The fundamental forces of nature.</td>
<td>5.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>W</td>
<td>Feb 05</td>
<td>Pre-test review.</td>
<td>1-5</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>Feb 07</td>
<td>Test #1: Mathematical description of particle’s motion. Newton's Laws and their applications.</td>
<td>1-5</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>M</td>
<td>Feb 10</td>
<td>Work done a force.</td>
<td>6.1-6.4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>W</td>
<td>Feb 12</td>
<td>Kinetic energy.</td>
<td>6.5-6.7</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>Feb 14</td>
<td>Power. Potential energy. Conservative and non-conservative forces.</td>
<td>6.8, 7.1-74</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>M</td>
<td>Feb 17</td>
<td>More examples on work, energy, power.</td>
<td>6-7</td>
<td></td>
</tr>
<tr>
<td></td>
<td>W</td>
<td>Feb 19</td>
<td>Linear momentum and its conservation.</td>
<td>8.1-8.2</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>Feb 21</td>
<td>Collisions. Center of mass.</td>
<td>8.3-8.6</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>M</td>
<td>Feb 24</td>
<td>No classes – Winter recess</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>W</td>
<td>Feb 26</td>
<td>No classes – Winter recess</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>F</td>
<td>Feb 28</td>
<td>No classes – Winter recess</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>M</td>
<td>Mar 02</td>
<td>Using conservation laws for solving collision problems.</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td></td>
<td>W</td>
<td>Mar 04</td>
<td>Pre-test review.</td>
<td>6-8</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>Mar 06</td>
<td>Test #2: Energy, work, power, linear momentum. Conservation laws. Collisions.</td>
<td>6-8</td>
<td></td>
</tr>
<tr>
<td>Week</td>
<td>Day</td>
<td>Date</td>
<td>Lecture Topics</td>
<td>Chapters</td>
<td>HW</td>
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<tr>
<td>10</td>
<td>M</td>
<td>Mar 09</td>
<td>Rotational motion in three dimensions. Angular position, speed, and acceleration.</td>
<td>10.1-10.3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>W</td>
<td>Mar 11</td>
<td>Rotational kinetic energy. Torque. Rigid object in equilibrium.</td>
<td>10.4-10.6</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>Mar 13</td>
<td>Dynamics of a rigid object. Angular momentum and its conservation.</td>
<td>10.7-10.9</td>
<td></td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>Mar 16</td>
<td>Precessional motion. Gyroscopes. Rolling motion.</td>
<td>10.10-10.11</td>
<td></td>
</tr>
<tr>
<td></td>
<td>W</td>
<td>Mar 18</td>
<td>Planetary motion. Kepler’s laws.</td>
<td>11</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>Mar 20</td>
<td>Oscillatory motion. The simple pendulum.</td>
<td>12.1-12.5</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>M</td>
<td>Mar 23</td>
<td>Damped and forced oscillations.</td>
<td>12.6-12.7</td>
<td></td>
</tr>
<tr>
<td></td>
<td>W</td>
<td>Mar 25</td>
<td>Waves.</td>
<td>13-14</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>Mar 27</td>
<td>Fluid mechanics. Pressure.</td>
<td>15.1-15.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>Mar 30</td>
<td>Fluid dynamics. Bernoulli’s equation.</td>
<td>15.6-15.8</td>
<td></td>
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<tr>
<td></td>
<td>W</td>
<td>Apr 01</td>
<td>Pre-test review.</td>
<td>10-15</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>Apr 03</td>
<td>Test #3: Rotational motion in three dimensions. Planetary motion. Oscillations. Fluid mechanics.</td>
<td>10-15</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>M</td>
<td>Apr 06</td>
<td>Temperature. The zeroth law of thermodynamics.</td>
<td>16.1-16.4</td>
<td></td>
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<tr>
<td></td>
<td>W</td>
<td>Apr 08</td>
<td>Kinetic theory of gases.</td>
<td>16.5-16.6</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>Apr 10</td>
<td>Heat. Internal energy.</td>
<td>17.1-17.4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>Apr 13</td>
<td>The first law of thermodynamics.</td>
<td>17.5-17.10</td>
<td></td>
</tr>
<tr>
<td></td>
<td>W</td>
<td>Apr 15</td>
<td>Heat engines. The second law of thermodynamics.</td>
<td>18.1-18.4</td>
<td>13</td>
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<tr>
<td></td>
<td>F</td>
<td>Apr 17</td>
<td>Entropy.</td>
<td>18.5-18.8</td>
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<tr>
<td>13</td>
<td>W</td>
<td>Apr 22</td>
<td>Final Exam (cumulative), 12:00-3:00 PM</td>
<td>1-8, 10-18</td>
<td></td>
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WebAssign: How to Get Started

- **Day One: Register**
  1. Go to [https://webassign.net](https://webassign.net) and click on LOG IN
  2. Click on ‘Enter Class Key’
  3. Enter the Class Key: **oakland 4671 3553**
  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
     - **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**
  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/](https://www.webassign.com/support/student-support/)

- **To access the Homework:**
  1. Go to [https://www.webassign.net/wa-auth/login](https://www.webassign.net/wa-auth/login)
     (I suggest you bookmark this page)
  2. After you Login, click on ‘My Assignments’
  3. **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
     - Web Assign 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 ##’ or ‘Submit All New Answers’
     - Remember that there is a **maximum of 5 submissions** for each problem