Physics for Science and Engineering II
Physics 202
Winter 2009 Syllabus

Instructor
- Frank Skorina
- Office 040, frank.skorina@wwcc.edu
- 527-4578 (w), 301-3839 (c), 527-4480 (fax)

Location
- Room 225, except Wednesdays (room 241)

Course Description
This course is the second in a three part series that introduces basic physics concepts. This course will use mathematics to model physical behaviors so algebra and trigonometry will be used heavily. Knowledge of calculus is required.

Specifically, this course will cover gravity, rotation, oscillations, fluids, thermodynamics, and waves. This course lays the foundation for engineering courses in dynamics, mechanics of materials, fluid mechanics, thermodynamics, heat transfer, and wave mechanics.

Class Schedule
- Mondays, Tuesdays, Wednesdays, and Fridays, 12:30 pm – 1:20 pm
- Thursdays, 12:30 pm – 2:20 pm (LABS)
- No class on Monday, January 19 (MLK's Day)
- No class on Monday, February 16 (Presidents' Day)
- No class on Thursday, March 5 (Advising Day)
- Last class is on Tuesday, March 17
- Final exam is on Friday, March 20, 12:30 pm – 2:20 pm

Materials
- Physics for Scientists and Engineers, Second Edition by Randall D. Knight
- Mastering Physics on-line homework system
- Scientific calculator

Accommodations
If you have a disability and need accommodations, please see the instructor after class or contact Claudia Angus, the Disabilities Coordinator at claudia.angus@wwcc.edu or 509-527-4543.
Grading

- Homework, 12%
- Quizzes, 12%
- Labs, 16%
- Exams, 60%
- Grade Table where $x$ is the percent of points earned:

<table>
<thead>
<tr>
<th>Grade</th>
<th>$x$ range</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>$\infty \geq x \geq 93$</td>
</tr>
<tr>
<td>A-</td>
<td>$93 &gt; x \geq 90$</td>
</tr>
<tr>
<td>B</td>
<td>$87 &gt; x \geq 83$</td>
</tr>
<tr>
<td>B-</td>
<td>$83 &gt; x \geq 80$</td>
</tr>
<tr>
<td>C</td>
<td>$77 &gt; x \geq 73$</td>
</tr>
<tr>
<td>C-</td>
<td>$73 &gt; x \geq 70$</td>
</tr>
<tr>
<td>D</td>
<td>$67 &gt; x \geq 60$</td>
</tr>
<tr>
<td>D+</td>
<td>$70 &gt; x \geq 67$</td>
</tr>
<tr>
<td>F</td>
<td>$60 &gt; x \geq -\infty$</td>
</tr>
</tbody>
</table>

Homework

- On-line homework given per chapter.
- Some written homework, usually due next class period.
- Questions on the homework will be answered at the beginning of class.
- Homework grade depends much on effort.

Quizzes

- Approximately 8 will be given during the quarter.
- Top six scores will count towards final grade.
- No makeup quizzes.

Labs

- Most Thursdays
- Required participation

Exams

- Four exams during the quarter
- Exam during finals week is not comprehensive.

Expectations

- Keep up with the material
- If you do not understand the material, take steps to understand it by
  1. Rereading the text and your notes
  2. Working with classmates
  3. Visiting the Science Learning Center
  4. Asking the instructor
Weekly Schedule

Week #1, January 5 – January 9
Chapter 12 – Rotation of a Rigid Body

Week #2, January 12 – January 16
Chapter 13 – Newton’s Theory of Gravity
Exam #1 on Thursday, January 15 (Chapters 12-13)
Chapter 14 – Oscillations

Week #3, January 20 – January 23
No class Monday, January 19
Chapter 14 – Oscillations

Week #4, January 26 – January 30
Chapter 15 – Fluids and Elasticity

Week #5, February 2 – February 6
Exam #2 on Monday, February 2 (Chapters 14-15)
Chapter 16 – A Macroscopic Description of Matter

Week #6, February 9 – February 13
Chapter 17 – Work, Heat, and the First Law of Thermodynamics

Week #7, February 17 – February 20
No class Monday, February 16
Chapter 18 – The Micro/Macro Connection

Week #8, February 23 – February 27
Chapter 19 – Heat Engines and Refrigerators
Exam #3 on Friday, February 27 (Chapters 16-19)

Week #9, March 2 – March 6
Chapter 20 – Traveling Waves
No class Thursday, March 5

Week #10, March 9 – March 13
Chapter 21 – Superposition

Week #11, March 16 – March 20
Review/Make-up
Final Exam on Friday, March 20 (Chapters 20-21)

Disclaimer
Instructor reserves the right to make changes to this syllabus at any time.