PHYS 1112 - Introductory Physics II
Course Syllabus - Summer 2013

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Individuals with disabilities who need to request accommodations should contact the Disability Services Coordinator,
Student Center 214, 678-466-5445, disabilityservices@mail.clayton.edu.

Course Description:

Number and Title:

PHYS 1112 (CRN 53651)
Introductory Physics II

Credit Hours:

3.0 semester credit hours

Catalog Description:

An introductory course which will include electrostatics, electric current and circuits, and electromagnetism, and may also include optics and
modern physics. Elementary algebra and trigonometry will be used.

**Course Prerequisites and Co-requisites:**
Students must have completed Introductory Physics I and Introductory Physics Laboratory I (PHYS 1111 and PHYS 1111L). Certain life science students must be currently enrolled in Physics 1112L; others are not required to take PHYS 1112L. Consult your advisor if you are unsure whether or not you should be enrolled in PHYS 1112L.

**Computer Requirement:**
Each CSU student is required to have ready access throughout the semester to a notebook computer that meets faculty-approved hardware and software requirements for the student's academic program. Students will sign a statement attesting to such access. For further information on CSU's Official Notebook Computer Policy, please go to [http://itpchoice.clayton.edu/policy.htm](http://itpchoice.clayton.edu/policy.htm).

**Computer Skill Prerequisites:**
- Able to use the Windows™ operating system
- Able to use Microsoft Word™ word processing
- Able to send and receive e-mail using Outlook™ or Outlook Express™
- Able to attach and retrieve attached files via email
- Able to use a Web browser.

**In-class Use of Student Notebook Computers:**
Student notebook computers will not be used in the classroom in this course.

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**Course Objectives:**
- To learn the basic laws of electricity and magnetism, optics and special relativity.
To be able to apply the basics laws to solve elementary problems

To develop the processes of logical thought and organized reasoning.

Student Learning Outcomes:

General education outcomes:

The following links provide tabular descriptions of the communications outcome and the critical thinking outcome components (see PHYS 1112 in the tables):

- Communications outcomes components
- Critical thinking outcomes components

Biology outcomes:

PHYS 1112 supports outcomes 3 and 4 of the biology major:

- Outcome 3. Apply knowledge of physical sciences, mathematics, and statistics to biological concepts.
- Outcome 4. Communicate scientific information in a clear and concise manner both orally and in writing.

Teacher Education Policy: The content of this course syllabus correlates to education standards established by national and state education governing agencies, accrediting agencies and learned society/ professional education associations. Please refer to the course correlation matrices located at the following web site http://www.clayton.edu/arts-sciences/teachered/standardsoutcomes

Conceptual Framework:
The mission of the Teacher Education Unit is to prepare professional educators who engage in reflective practice and who are competent, caring, committed, collaborative, culturally responsive, and prepared to teach diverse learners in an ever-changing society.
Term:

Summer Semester 2013

Instructor:

Dr. Tatiana Krivosheev
phone: (678) 466-4783
fax: (678) 466-4899
e-mail: TatianaKrivosheev@clayton.edu
internet: http://a-s.clayton.edu/krivosheev/index.htm

Office:

Faculty Hall, Room 111

Office Hours:

Monday and Wednesday: 9:40 a.m. - 10:10 a.m.; 12:30 p.m. - 1:10 p.m.

Other times by appointment.

Class Meetings:

Classroom:

Lecture Hall, Room B-13
Class Times:
10:15 a.m. - 12:20 p.m., Monday and Wednesday

Textbook Information:

Text:

Text Coverage:
Chapters 15-25

Evaluation:

In-class examinations: 2-75 minute exams @ 150 points 300

In-class quizzes: 10 quizzes @ 15 points 150

Final examination: 200

TOTAL 650

Quizzes covering fundamentals of study assignments will be administered. Quizzes will be announced in advance.

Grading:

A  90 - 100%
B  80 - 89%
C  70 - 79%
Mid-term Progress Report:

The mid-term grade in this course, which will be issued on June 17, reflects approximately 30% of the entire course grade. Based on this grade, students may choose to withdraw from the course and receive a grade of "W." Students pursuing this option must fill out an official withdrawal form, available in the Office of the Registrar, by mid-term, which occurs on June 21, 2013. Instructions for withdrawing are provided at this link.

The last day to withdraw without academic accountability is Friday, June 21, 2013.

Course Schedule:

The course schedule for PHYS 1112, Introductory Physics II, is provided in the table below. Text references are to Serway/Vuille, College Physics, Volume 2, 8th edition, Thomson, 2008

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<th>Class</th>
<th>Date</th>
<th>Topic/Exam</th>
<th>Text Chapter</th>
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<td>1</td>
<td>May 20</td>
<td>Electric Forces and Fields</td>
<td>15.1-15.6</td>
</tr>
<tr>
<td>2</td>
<td>May 22</td>
<td>Electrical Energy and Electric Potential</td>
<td>16.1-16.5</td>
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<td>May 27</td>
<td>No class – Memorial Day</td>
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<tr>
<td>3</td>
<td>May 29</td>
<td>Capacitance and Dielectrics</td>
<td>16.6-16.10</td>
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<tr>
<td></td>
<td>Date</td>
<td>Topic</td>
<td>Sections</td>
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<tr>
<td>4</td>
<td>May 31</td>
<td>Current</td>
<td>17.1-17.3</td>
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<tr>
<td>5</td>
<td>June 3</td>
<td>Resistance</td>
<td>17.4-17.8</td>
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<tr>
<td>6</td>
<td>June 5</td>
<td>dc Circuits</td>
<td>18.1-18.4</td>
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<tr>
<td>7</td>
<td>June 10</td>
<td>Exam 1</td>
<td>15-18</td>
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<tr>
<td>8</td>
<td>June 12</td>
<td>Magnetic Forces and Fields</td>
<td>19.1-19.4</td>
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<tr>
<td>9</td>
<td>June 17</td>
<td>Torque due to Magnetic Field</td>
<td>19.5-19.8</td>
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<tr>
<td>10</td>
<td>June 19</td>
<td>Faraday's Law</td>
<td>20.1-20.5</td>
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<td></td>
<td>June 21</td>
<td><strong>Midpoint: the last day to withdraw without academic accountability</strong></td>
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<tr>
<td>11</td>
<td>June 24</td>
<td>Self Inductance and RL-circuits</td>
<td>20.6-20.8</td>
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<tr>
<td>12</td>
<td>June 26</td>
<td>ac Circuits</td>
<td>21.1-21.7</td>
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<tr>
<td>13</td>
<td>July 1</td>
<td>Problem Solving Session</td>
<td>19-21.7</td>
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<tr>
<td>14</td>
<td>July 3</td>
<td>Reflection and Refraction</td>
<td>22.1-22.7</td>
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<tr>
<td>15</td>
<td>July 8</td>
<td>Exam II</td>
<td>19-21.7</td>
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<tr>
<td>16</td>
<td>July 10</td>
<td>Mirrors</td>
<td>23.1-23.4</td>
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<tr>
<td>17</td>
<td>July 15</td>
<td>Lenses</td>
<td>23.5-23.7</td>
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<tr>
<td>18</td>
<td>July 17</td>
<td>Mirrors and Lenses</td>
<td>23.1-23.7</td>
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<tr>
<td>19</td>
<td>July 22</td>
<td>Optical Instruments</td>
<td>25.2-25.8</td>
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<td>20</td>
<td>July 24</td>
<td>Final Exam</td>
<td>15 - 25</td>
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Course Policies:

General Policy

Students must abide by policies in the Clayton State University Student Handbook, and the Basic Undergraduate Student Responsibilities.

University Attendance Policy

Students are expected to attend and participate in every class meeting. Instructors establish specific policies relating to absences in their courses and communicate these policies to the students through the course syllabi. Individual instructors, based upon the nature of the course, determine what effect excused and unexcused absences have in determining grades and upon students’ ability to remain enrolled in their courses. The university reserves the right to determine that excessive absences, whether justified or not, are sufficient cause for institutional withdrawals or failing grades.

Attendance is expected for all class periods. Attendance is required for quiz and examination periods. Any absence must be accompanied by a written excuse from a doctor or other competent authority. Without excuse, a grade of zero points will be assigned for the missed work. If a valid excuse is provided:

- Make-up quizzes will be given only if they are taken before quiz solutions are posted (usually the evening of the day the quiz is given). If the make-up quiz cannot be taken before the solutions are posted, the missed quiz will be counted as one of approximately two quizzes which can be dropped (approximately twelve quizzes will be given in the course. The highest ten quiz scores will be used to calculate the course grade).
- Make-up examinations will be given only if they are taken before graded examinations are returned to students (next class period). In the event that a make-up examination cannot be taken before exams are returned to students, the missed examination will not count in calculating the course grade. This means that the final exam will be responsible for a greater weight in determining the course final grade.
- The final examination must be taken.

Late bonus problems will not be accepted. Late materials will not be accepted after the final course meeting (July 24, 2013).

Academic Dishonesty
Any type of activity that is considered dishonest by reasonable standards may constitute academic misconduct. The most common forms of academic misconduct are cheating and plagiarism. All instances of academic dishonesty will result in a grade of zero for the work involved. All instances of academic dishonesty will be reported to the Office of Student Life/Judicial Affairs. Judicial procedures are described at [http://adminservices.clayton.edu/studentconduct/](http://adminservices.clayton.edu/studentconduct/).

**Disruption of the Learning Environment**

Behavior which disrupts the teaching–learning process during class activities will not tolerated. While a variety of behaviors can be disruptive in a classroom setting, more serious examples include belligerent, abusive, profane, and/or threatening behavior. A student who fails to respond to reasonable faculty direction regarding classroom behavior and/or behavior while participating in classroom activities may be dismissed from class. A student who is dismissed is entitled to due process and will be afforded such rights as soon as possible following dismissal. If found in violation, a student may be administratively withdrawn and may receive a grade of WF.

A more detailed description of examples of disruptive behavior and appeal procedures is provided at: [http://a-s.clayton.edu/DisruptiveClassroomBehavior.htm](http://a-s.clayton.edu/DisruptiveClassroomBehavior.htm)

**Other Policies**

The use of simple calculators is allowed for all quizzes and examinations. All examinations are closed book. No student-produced "memory sheets" or note cards are allowed. An instructor-produced reference data pamphlet will be provided for all quizzes and examinations.

No smoking, eating or drinking is permitted at any time in the classroom.

**Important dates:**

Quizzes: announced one class meeting in advance.

Tentative schedule for examinations:

- Exam #1: June 10, 2013
- Exam #2: July 8, 2013
- Final examination: July 24, 2013
Last day to withdraw without academic penalty: Friday, June 21, 2013.

Last update: December 23, 2002