Physical Science
PSC1121-A001 Summer-A 2012: May 14 - June 21, 2012
MoTuWeTh 12:00 PM - 1:50 PM, MAP 0260

Instructor: Dr. Aniket Bhattacharya
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Office Hours: W 2:00 PM - 4:00 PM email: aniket@physics.ucf.edu
or by appointment Web: www.physics.ucf.edu/~aniket

Course Description:
PSC 1121 is one of the 3 credit hours Science Foundation of the General Education Program (GEP) courses. The course covers fundamental laws of mechanics, heat waves, electricity and magnetism, properties of gases and liquids etc., and some elements of modern physics. It requires limited amount of mathematical background (High School algebra and trigonometry).

Objectives:
The major objective of this course is to provide an outlook and scientific basis of everyday experiences. We will look at the history of some of the important developments and provide an outlook of modern theory of matter and waves. Students will be able to describe the basic principles of mechanics, heat, electricity and magnetism, describe matter in terms of its constituents particles. They will appreciate the importance of mathematics to physical science and use simple math skills to solve physical problems.

Course Text & related materials:
• Text: A world view: 7th edition (required)
  Authors: Kirkpatrick and Francis
  Publisher: Thompson

• A WebAssign is required as a component of the course to solve homework problems. In order to access the WebAssign homework please visit www.webassign.com. Your user name and password has been emailed to you to your UCF knights email address with which you have registered for this course. For example if your email is xyz123@knights.ucf.edu then your WebAssign user name for this course is xyz123. Prior username and password has been overwritten while creating an account for you for this course. The institution code is “UCF”. If you run into difficulties, please contact me. I’ll add you in the class list.

• iClicker:
  We will be using the iClicker feedback system in class every day. Please get the correct clicker for our section as there is more than one type of clicker used on campus. You may get one secondhand, and you should be able to sell your used iClicker at the end of the semester if you do not need it for future courses. Register your clicker at www.iclicker.com/registration. Be sure to enter your NID in the Student ID field on the web site, including the two leading letters. There will be a version 2 iClicker available, and while it is not required for this course and is more expensive it is backwards-compatible with version 1 and will work.
Course Organization & expectation:
The course is quite intense (and specially for a 6-week course during summer) and it will require you to invest considerable amount of time in studying and problem solving. The course will consist of a set of class lectures with demonstrations, unannounced quizzes, and I-clicker questions. Ideally, class time will be used to clarify the concepts that you have read in the text and to work out examples to show and help avoid common pitfalls. To obtain maximum benefit from this course you should read the materials before and after they are covered in class. It is very difficult but not impossible to catch up if you fall behind. Experience has shown that problem solving done in class is helpful for everybody only if the majority of the students are familiar with the topic. Class attendance is very important since some of the quizzes, test questions will be drawn from the class lectures, demonstrations, and discussions. Thus, reading the material prior to class attendance is not only required but will be helpful to yourself, and also to the rest of the class.

Homework & Quizzes:
Homework will be submitted online at http://www.WebAssign.net/login.html. You are expected to check for new assignments without being notified. Doing a thorough job on the homework problems, i-Clicker questions and quizzes can earn you up to 30% of the total credit for the course and will be a good preparation for the exams. The quizzes will NOT be announced. Quizzes will be based on previously covered material up to and including the quiz day reading assignment. Usually, they will consist of 1 problem with several parts or several multiple choice problems to be answered in 10 minutes or less. It is anticipated that about 10-12 quizzes (on an average 2 quizzes per week) will be given and the lowest 2 scores will be dropped. As two quizzes will be dropped, there will be no make-up quizzes!

Examinations:
There will be 3 in-class tests and a comprehensive final exam. All examinations will be closed book and closed notes. A formula sheet will be provided. All exams may be problem solving, multiple choice, or a combination of the two. For all problems, you need to provide the steps that lead to your answers. You MUST know your student ID number and record it accurately in the proper location on the test form and on each written exam so that the computer can keep track of your scores as the term progresses. (You must SHOW your UCF photo ID card when you turn in your exam answer sheet.) A protractor, ruler and calculator with trigonometric capabilities (TI 83 or similar) may be used during exams. However, calculators must not have any pre-programmed physics information. Cell phones need to be turned off.

Grades:
The grades of exams, homework, quizzes, i-Clicker scores, and labs will be added together to determine your grade. NO GRADE INFORMATION WILL BE GIVEN OVER THE TELEPHONE or by email.

Your grade in this course is based on the following weights:

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight</th>
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<tbody>
<tr>
<td>Three in-class exams</td>
<td>45 %</td>
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<tr>
<td>Comprehensive Final exam</td>
<td>20 %</td>
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<tr>
<td>Quizzes</td>
<td>15 %</td>
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<tr>
<td>I-clicker questions</td>
<td>5 %</td>
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<tr>
<td>Homework</td>
<td>15 %</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>100 %</strong></td>
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Final grades will be given according to the following scale:

- A: 85% and above
- B: (75 - 84)%
- C: (60 - 74)%
- D: (50 - 59)%
- F: < 50%

For borderline cases +/- grades will be considered.

Tentative Examination schedules and coverage (subject to change):

- Test 1: Thursday, May 24 lecture period (MAP 0260)
- Test 2: Thursday, June 07 lecture period (MAP 0260)
- Test 3: Monday, June 18 lecture period (MAP 0260)
- Final: Thursday, June 22 lecture period (MAP 0260)

Missed Work Policy:
It is Physics Department policy that making up missed work will only be permitted for University-sanctioned activities and bona fide medical or family reasons. Authentic justifying documentation must be provided in every case (in advance for University-sanctioned activities). At the discretion of the instructor, the make-up may take any reasonable and appropriate form including, but not limited to the following: allowing a ‘dropped’ exam, a replacement exam, replacing the missed work with the same score as a later exam. All assignment and exam grades are final 72 hours after they have been returned. Please contact me before this 72-hour period is over if you have a grading dispute.

Other Policies:
During exams and quizzes only a formula sheet (provided) can be used. No books, lecture notes or anything else is allowed to be used. You should show your work in quizzes and tests, i.e., a step by step solution of the problem should be presented. No attempt of cheating will be tolerated. If a student tries to cheat at a quiz or a test, the student will earn an F for that quiz or test. All electronic devices such as cell phones, laptop computers, blackberries, i-phones etc. should be turned off during class hours, exams and quizzes. Any attempt to use such devices, or use books or lecture notes, or communications and exchange of notes between students during tests or quizzes will be considered an attempt of cheating.

Other relevant informations:

- **Conduct:** Please turn off your cell phones before entering class, and please don’t have any sidebar conversations during class. There will be ample opportunity for you to talk during class at certain times. We will take a 2-3 minute break each day, and are also encouraged to talk during clicker questions. However, it is imperative that the class is quiet at all other times so that your fellow students are not distracted. I encourage you to raise your hand and ask relevant questions in class.

- **Disability Access Statement:** As stated on the website http://www.sds.ucf.edu/Facultyguide, “The University of Central Florida is committed to providing reasonable accommodations for all persons with disabilities. This syllabus is available in alternate formats upon request. Students with disabilities who need accommodations in this course must contact the professor at the beginning
of the semester to discuss needed accommodations. No accommodations will be provided until the student has met with the professor to request accommodations. Students who need accommodations must be registered with Student Disability Services, Student Resource Center Room 132, phone (407) 823-2371, TTY/TDD only phone (407) 823-2116, before requesting accommodations from the professor.”

- **Communication:** Communications and announcements will be conducted through and posted in Webassign. Please log in to Webassign on a daily basis to check for updates.

- **Calculators and Laptops:** Calculators may be used for exams and for clicker questions. You may take notes on a laptop. However, you may not use your laptop for facebook, web surfing, or other activities not directly related to class.

- **Important Dates:**
  - Classes begin: May 14, 2012
  - Late Registration: May 14 - May 18, 2012
  - Drop/swap deadline on myUCF: May 17, 2012
  - Last Day for full refund: May 17, 2012
  - Add deadline on myUCF: May 18, 2012
  - Withdrawl deadline: October 27, 2012
  - Grade forgiveness deadline on myUCF: June 07, 2012
  - Classes end: June 21
  - Final exam: June 21, 12:00 PM - 1:50 PM (MAP 0260)

- **Holidays:**
  - Memorial Day: Monday, May 28, 2012

Please note that this course outline is subject to change. The latest version will be posted at WebAssign.