

**PHY 3101 Introduction to Modern Physics**  
**(Fall 2009: Section 3907, 3 credits)**  
Tentative Syllabus (Version of 28 August 2008)  
<http://www.phys.ufl.edu/~meisel/PHY3101-Fall-2009.html>

**Instructor:**

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Office Hours: posted online, <http://www.phys.ufl.edu/~meisel/schedule.htm>, and by appointment.

**Email Correspondence with Instructor:**

Professor Meisel will attempt to respond, within 24 hours, to email (from UF email accounts) if the message contains the name of the student. **Email will only be sent to UF Email addresses.**

**Prerequisite:**

PHY 2049 or equivalent.

**Meeting Times:**

Mondays, Wednesdays, Fridays: 4th period (10:40 am – 11:30 am) in NPB 1002. Students are expected to attend the lecture sessions.

**Textbook:**

*Modern Physics* (4th edition), by Paul A. Tipler and Ralph A. Llewellyn (W.H. Freeman & Co., New York, 2003). The only required text is *Modern Physics* (4th Edition) by Tipler and Llewellyn, and from online sites in July 2009, one could purchase a used copy for under \$35. Please note that local bookstores may only stock the 5th Edition, which a student can use for this course, and the price for Fall 2009 is \$98.25 (used), checked 17 July 2009 at UF Bookstore online.

**Posting:**

Materials and information concerning the course will be posted on the Course Webpage, see <http://www.phys.ufl.edu/~meisel/PHY3101-Fall-2009.html>

**Subject and Focus of the Course:**

In the first part, the course will introduce students to the foundations of modern physics, namely relativity, quantum mechanics and statistical physics. In the second part, applications of the concepts will be presented in various areas of solid-state, nuclear, and particle physics, with additional extensions to astrophysics and biological physics.

**Attendance:**

Attendance in class is definitely expected since material outside the textbook may be presented. You are responsible for all material covered in the text and in class. All of this material is relevant for any examination, unless otherwise stated.

**Grading:**

During the course, there will be three, 50-points, “mid-term” examinations. It is anticipated that the mid-term examinations will be given in the evening class periods (typically 8:20 pm to 10:10 pm). At the end of the course, there will be one, 100-points, two-hour, final examination. In class, there will be eleven, 5-point quizzes, and the top 10 scores will be summed to count toward the final grade of the course. In class, there will be 50 points acquired with the H-ITT System (Remote Response System). In other words, the total number of available points is 350. Attendance at all examinations and quizzes is definitely expected. Some extra-credit points may be available, and these opportunities will be described during the course. Finally, the UF grading policies can be found at: <http://www.registrar.ufl.edu/catalog/policies/regulationgrades.html>

**Homework Problems:**

Homework will not be collected or graded. However, questions on the quizzes and examinations will be based on these types of problems and similar ones.

**Make-Up Quiz and Exam Policy:**

Only in the event of extraordinary circumstances will students be allowed to take a make-up quiz or exam. The only way students will be allowed to take a make-up exam is if they have a legitimate excuse, accompanied by some documentation from either a medical doctor or an attorney. Notes from family members are not acceptable.

**Special Note for Fall 2009:**

The appearance of the H1N1 (swine) flu virus has caused UF to post new guidelines for students who think they may be ill. Since these recommendations may change during the course of the semester, all students are encouraged to monitor the policy at <http://www.ehs.ufl.edu/h1n1/>. As of 21 August 2009, the policy asks students with symptoms to remain at “home” for a period of up to 3 to 5 days, depending on the severity of the symptoms. If this situation happens to you and you would like to be eligible for make-up work, then you should contact me via email as soon as you need to miss a graded-event and you will need to keep me informed of your status as it evolves.

**Academic Honesty:**

Each student is expected to generate graded work by an individual and original effort. It is understood that some students benefit from “group study”. However, all quizzes, mid-term examinations, and the final examination will be individual efforts, using only the materials authorized by the Instructor. Any violation of this policy will be treated according to UF policy (e.g. usually a zero grade is given on the assignment). Please review the University Policies on Academic Honesty, and helpful links are:

<http://www.dso.ufl.edu/studentguide/studentrights.php#academichonestyguidelines>

<http://www.dso.ufl.edu/sccr/>

**Accommodations:**

Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation. The Dean of Students Office maintains a webpage at <http://www.dso.ufl.edu/>.

### **Incomplete Policy:**

A grade of incomplete is typically given to students who endure a situation in which they are incapable of completing the coursework. The I-grade is not to be given to students who are simply dissatisfied with their performance in the course. If you find you are in a situation that might qualify you for an I-grade in this course and you want to pursue this potential option, then you must contact me immediately and be sure to have the necessary documentation from a medical doctor or an attorney. Again, letters from family members are not acceptable. A letter of understanding indicating when and how the incomplete grade will be made up will eventually be drafted and signed by the student and the instructor.

### **Special Notes about the Syllabus:**

Please note that the dates for all quizzes, examinations and chapter starts are TENTATIVE. The schedule will be finalized during the course and will be announced in class.

**Mid-term Exam 1: \*\*Periods E2-E3 (8:20 pm to 10:10 pm), Wednesday, 23 September. \*\***

**Mid-term Exam 2: \*\*Periods E2-E3 (8:20 pm to 10:10 pm), Wednesday, 28 October. \*\***

**Mid-term Exam 3: \*\*Periods E2-E3 (8:20 pm to 10:10 pm), Monday, 07 December. \*\***

**Final Exam (Group 14E): Monday, 14 December, 5:30 pm to 7:30 pm, all material covered.**

**\*\* Fixed unless otherwise announced. See Course Webpage for Locations. \*\***

### **H-ITT Points:**

During the class periods, the H-ITT System (Remote Response System) will be used to monitor the understanding of the topics being discussed. The H-ITT System may be used at any time during the class period. In some instances, the responses will not be graded as correct or incorrect, so the point is awarded for participation. For the other cases, the exercise will be graded 2 points for the correct response and 1 point for an incorrect response. A total of about 65 points will be available with the H-ITT System, but only a maximum of 50 points will count. In other words, about 15 points will be dropped. There will be no make-up of missed H-ITT opportunities due to any reason.

### **H-ITT Remote Responder Required:**

You need to have your own H-ITT remote transponder. Before purchasing a new one or borrowing an old one from a friend, please review the hardware requirements at: <http://www.phys.ufl.edu/~hitt/>

### **H-ITT Registration Required:**

You must register your unit before Monday, 31 August. The registration web-based site is at: <http://www.phys.ufl.edu/~hitt/>. **YOU MUST USE YOUR UF EMAIL ADDRESS!**

### **H-ITT Comments:**

You are responsible for having an operational and appropriately registered device.

### **Teaching Assistants (TAs):**

If TAs are made available for this course, their office hours and related details will be announced on the Course Webpage.