

## PHYSICS 309L, SPRING 2016

### Instructor:

Willy Fischler, RLM 9.310A

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Office Hours: Wednesdays 12:00 noon - 1:15 pm

Announcements posted on Canvas: <http://canvas.utexas.edu/>

Homework assignments and solutions will be regularly posted on Quest: <https://quest.cns.utexas.edu/>

### TA:

Aditya Aravind, RLM 9.222

email: [aditya.phy@utexas.edu](mailto:aditya.phy@utexas.edu)

Office Hours: M 5:30-6:30 pm, Th 5:00-6:30 pm

Review session: tba

### Textbook:

W.Thomas Griffiths and Juliet W. Brosing: "The Physics of Everyday Phenomena, A Conceptual Introduction to Physics" Mc Graw Hill 2012

Physics 309L will cover concepts in electromagnetism, quantum mechanics, relativity and cosmology. Physics 309K or an equivalent course is a prerequisite. No prior math course is required beyond the usual high school math and science. This course is conceptual, not computational, and is designed for non-technical students. There are demonstrations and occasional films.

In Physics 309K we covered mostly concept familiar with our day to day experience. In the present class we will depart gradually from the familiar to the more peculiar realms of Quantum Physics and if time permits Cosmology, the physics describing the history of the Universe.

The organization of the chapters is as follows:

- 1) Electrostatic phenomena
- 2) Electric Circuits
- 3) Magnetism
- 4) Electromagnetism
- 5) Waves
- 6) Electromagnetic waves
- 7) Special Relativity, General Relativity, Cosmology
- 8) Quantum Mechanics

The order of subject matter will roughly follow the book but may deviate at times and additional material not covered in the book might be presented. The students will be notified in class what the subject matter for the next class will be so that they can read in advance relevant material.

### Attendance:

Class attendance is not mandatory but is strongly recommended. Class interruptions such as

arriving late, leaving early, or chatting, are unacceptable. Your cooperation in maintaining a good atmosphere for learning is required.

Grades:

The grades will be based upon homeworks (40%), three in class exams (25%) and one mandatory final exam (35%). The worst two homework grades will be dropped and the worst test will be dropped. The exams will consist of questions similar to those on the homework.

Exam 1: Friday, February 19, 9:00 am - 10:00 am (in class)

Exam 2: Friday, March 25, 9:00 am - 10:00 am (in class)

Exam 3: Friday, April 29, 9:00 am - 10:00 am (in class)

Final Exam: Saturday, May 14, 7:00-10:00 pm

Reference Cards: You may use one 8.5 by 11 inches paper size note with anything you have written on it as a help note on any exam (including during the final exam), but no other references may be used.

Homeworks:

Will be posted on Quest approximately weekly. You are encouraged to discuss homework with anyone you wish.

Other:

Announcements will be posted on "Canvas": <http://canvas.utexas.edu>

Last day of the official add/drop period is January 22.

Last day an undergraduate student may change registration in a class to or from the pass/fail basis. is April 4.

Please notify me of any modification/adaptation you may require to accommodate a disability-related need. You will be requested to provide documentation to the Dean of Student's Office, in order that the most appropriate accommodations can be determined. Specialized services are available on campus through Services for Students with Disabilities. 471-6259, <http://www.utexas.edu/diversity/ddce/ssd/>

- Academic dishonesty will not be tolerated. For more information see <http://registrar.utexas.edu/catalogs/g10/ch01/index.html>

- By UT Austin policy, you must notify me of your pending absence at least fourteen days prior to the date of observance of a religious holy day. If you must miss a class, an exam, a work assignment, or a project in order to observe a religious holy day, you will be given an opportunity to complete the missed work within a reasonable time after the absence.