

PHYSICS 389K, FALL 2012

Instructor:

Willy Fischler, RLM 9.310A, 471-4072

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Office Hours: Wednesdays 11:00 am - 12:30 noon

Announcements will be regularly posted on Blackboard: <https://courses.utexas.edu/>

Assistants:

TA: Dan Carney, RLM 9.303

Office Hours: Tuesdays 11:00 am - 12:30 noon

email: carney@physics.utexas.edu

Textbook:

Modern Quantum Mechanics (revised version) by J.J. Sakurai (The Benjamin/Cummings Publishing Company, 1994)

Description of the course:

The aim in this course is to develop, from first principles, an operational understanding of the basic tools used in describing physical phenomena at the quantum mechanical level.

The organization of the course is as follows:

- 1) Fundamental concepts
- 2) Quantum dynamics
- 3) Rotations and angular momentum
- 4) Symmetry
- 5) Approximation methods
- 6) Identical particles

If time permits we will look at scattering and possibly at fundamental issues with measurements in 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 will 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.

Grades:

The grades will be based upon homeworks (25%), three in class tests (25%) and one mandatory final exam (50%).

In class tests:

first test: Tuesday October 2, 9:30 - 10:45 am

Tests 2 and 3 dates to be announced.

Final Exam:

Tuesday, December 18, 9:00-12:00 noon

Homeworks:

Will be posted on blackboard. Homework is due at the beginning of class on the specified day.

Other:

Last day of the official add/drop period is September 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 Students 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 examination, 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.

-Note the following recommendations regarding emergency evacuation from the Office of Campus Safety and Security, 512-471-5767, <http://www.utexas.edu/safety/> :

- Occupants of buildings on The University of Texas at Austin campus are required to evacuate buildings when a fire alarm is activated. Alarm activation or announcement requires exiting and assembling outside.

- Familiarize yourself with all exit doors of each classroom and building you may occupy. Remember that the nearest exit door may not be the one you used when entering the building.

- Students requiring assistance in evacuation shall inform their instructor in writing during the first week of class.

- In the event of an evacuation, follow the instruction of faculty or class instructors.

- Do not re-enter a building unless given instructions by the following: Austin Fire Department, The University of Texas at Austin Police Department, or Fire Prevention Services office.

- Behavior Concerns Advice Line (BCAL): 512-232-5050

- Link to information regarding emergency evacuation routes and emergency procedures can be found at: www.utexas.edu/emergency