

# PHYS3701 Introduction to Quantum Mechanics I Spring 2021

This is a course in the fundamentals of quantum mechanics. Although this course rests on the foundation of what you learned in Wave Physics and Modern Physics, we will take an approach that starts with abstract states and operators and builds from there. One goal is to prepare you for the follow-up course on applications of quantum mechanics to atoms, molecules, solids, nuclei, and elementary particles.

**INSTRUCTOR:** Jim Napolitano email: [tuf43817@temple.edu](mailto:tuf43817@temple.edu)  
Office Hours: Wednesdays 1-3pm on Zoom or *by appointment*

**GRADING:** Dmitrii Nikolaev email: [tuk96643@temple.edu](mailto:tuk96643@temple.edu)

**WEB PAGE:** <https://phys.cst.temple.edu/~napolj/PHYS3701/>

**MEETINGS:** SERC 116 Tue 12:30-13:50, Thu 12:30-13:50

**TEXTBOOK:** John Townsend, *A Modern Introduction to Quantum Mechanics*, 2e  
<https://www.uscibooks.com/townsend3.htm>

The syllabus (including homework assignments) is posted on the course web page, along with general course information and a detailed list of topics we will cover. **Each Tuesday class will start with a 15-minute quiz**, for which you can use your book or other materials, but which you must complete on your own. **Homework is due at the start of class each Thursday**, and I encourage you to collaborate with other students on those assignments. A final exam will be given at the assigned time during finals week.

## GRADING POLICY

Your course grade will be determined by the homework (15%), quizzes (45%), and final exam (40%). Cutoffs for course grades *A*, *B*, and *C* are 90%, 80%, and 70%, respectively. I expect to make some use of “grade modifiers”, that is  $\pm$  after the grade. I may make other adjustments to the overall grading scheme if there are special circumstances.

## LEARNING OUTCOMES

Upon successfully completing the course students will demonstrate an ability to apply concepts and theories of Quantum Mechanics in problem solving tasks, as well as the ability to make use of physical principles along with mathematics to describe quantum mechanical phenomena. The quizzes will emphasize these abilities, as well as the raw knowledge associated with this subject.

## ACADEMIC INTEGRITY STATEMENT

Put simply, don't copy someone else's homework, and don't cheat on the quizzes or final exam. If I suspect you of either, I will ask for an explanation. If your explanation is unsatisfactory, you will be given a grade of zero and reported to the College. If this happens more than once, you will be given an *F* for the course.