

Modern Physics

Instructor: Assoc. Prof. Dr. Taylan Akdoğan

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Course assistant: TBA

Office hours: I will not be able to hold an office-hour at Bahçeşehir University. However, you can visit my office at Boğaziçi University with appointment. And, feel free to send questions via email about the course subjects at any time. I will be prompt to reply them as efficiently as possible.

Course schedule: TBA

Course page: “<http://alum.mit.edu/www/akdogan>”. Problem sets, exams, and general course information will be found here.

About the course: Modern Physics with an emphasis on physical thinking and order of magnitude estimates. The subjects covered by this course will include the special theory of relativity, applications of the Schrödinger equation, hydrogen atom and applications of quantum theory to nuclear structure, nuclear reactions, condensed matter physics, elementary particles and their interactions, astrophysics, cosmology, in addition to some discussions about the latest progress in the area of experimental and theoretical physics.

Prerequisites: Halliday-Resnick level fundamental level physics.

Required text: None. Will be provided as needed.

Attendance: I expect you to come to class regularly and on time. You should be prepared to discuss the textbook material and to have worked on the assigned homework problems. I reserve the right to adjust your final course score up or down by a grade step based on the quality and extent of your contributions.

Homework: This will be an integral part of the learning process. There will be suggested problems. I encourage you to work collaboratively on these problems. Do not be shy about coming to me or course assistants for help with the homework.

Exams: There will be a midterm, and a final exam. Noth exams will be closed book/closed notes. Calculators are neither needed nor allowed. **You** can prepare a cheat-sheet of size A4 to be used during the exams, but you cannot share it with your friends.

Grading: The weights that will determine the cumulative grade are as follows:

	Contribution
Midterm	40%
Final	50%
Classroom contribution	10%

The final grades will be determined according to the distribution of cumulative grades and the classroom contributions.