## ISTANBUL TECHNICAL UNIVERSITY Faculty of Arts and Sciences - Physics Engineering

FIZ 201E Modern Physics Dr. M.Murat SUNAR

2019-2020 Spring

E-mail: sunarm@itu.edu.tr

Textbook:

**Concepts of Modern physics** 

A. Beiser

**Reference Materials:** 

Modern Physics from a to Z James William Rohlf, James Rohlf Çağdaş Fiziğin Kavramları (Arthur Beiser) Modern Physics (Kenneth Krane)

Fizik ve Mühendislikte Modern Fizik (John R. Taylor, Chris Zafaritos)

## **Course Outline**

| Week | Topic                        |
|------|------------------------------|
| 1    | Relativity                   |
| 2    | Relativity                   |
| 3    | Problem Solving Session      |
| 4    | Particle properties of waves |
| 5    | Wave properties of particles |
| 6    | Problem Solving Session      |
| 7    | Atomic Structure             |
| 8    | Theory of Hydrogen Atom      |
| 9    | Problem Solving Session      |
| 10   | Quantum Mechanics            |
| 11   | Quantum Mechanics            |
| 12   | Midterm                      |
| 13   | Molecular Structure          |
| 14   | Problem Solving Session      |

**Grading:** 

Midterm : 40% Final Exam : 60%

## Attendance:

A minimum of 70% attendance to the lectures is required to be able to take the final exam. A minimum of 15/40 is required to be able to take the midterm exam.

## **Academic Integrity**

Students who cheat during an exam will receive a grade of FF in the course.