

# How to Take Your Physics Classes Right From Your Computer

## Physics I: Mechanics (Pre-req: Algebra, Trigonometry, Calculus\*):

**Which Majors Take This Class:** Engineers, Most Sciences (Physics, Chem, Bio, etc), Math (depending on the school)

- [Lectures \(Khan Academy\)](#)
- [Lectures \(Michel Van Biezen\)](#)
- [Lectures \(MIT\)](#)
  - First year calculus is required for this set of lectures, but not the one's above
- [Textbook](#)
- [Practice Problems \(Khan Academy\)](#)
- [Practice Problems \(MIT\)](#)

## Physics II: Electricity and Magnetism (Pre-req: Physics I)

**Which Majors Take This Class:** Engineers, Most Sciences (Physics, Chem, Bio, etc), Math (depending on the school)

- [Lectures \(Khan Academy\)](#)
- [Lectures \(Michel Van Biezen\)](#)
- [Lectures \(MIT\)](#)
  - First year calculus is required for this
  - Calculus 3 comes up in this lecture series as well but not too much

## Vibrations and Waves (Pre-req: Physics I & II):

**Which Majors Take This Class:** Most Engineers, Physics

- [Lectures \(MIT\)](#)
  - These lectures require Calculus 3 as well.

- [Lectures \(Khan Academy\)](#)
  - This starts at the lecture beginning with waves. If you search through the playlist you will find lectures on other topics not listed above such as thermodynamics, harmonic motion, and more.
- [Textbook](#)

## Quantum Mechanics I (Pre-req: Vibrations & Waves):

**Which Majors Take This Class:** Physics, Computer Engineers, Electrical Engineers, Chemistry (they take their own class usually called 'physical chemistry' that covers quantum mechanics)

- [Lectures \(MIT\)](#)
- [Practice Problems](#)
- [Textbook](#)
  - This book is a little easier to follow but is made for engineers and goes into less depth
- **Textbook**(Second Favorite): Introductory Quantum Mechanics by Richard Liboff

## Quantum Mechanics II (Pre-req: Quantum Mechanics I):

**Which Majors Take This Class:** Physics

- [Lectures \(MIT\)](#)
- [Assignments](#)
- **Textbook:** Principles of Quantum Mechanics by R. Shankar

## Classical Mechanics (Pre-req: Differential Equations, Calculus 3, Physics I):

**Which Majors Take This Class:** Physics

- [Lectures \(Stanford\)](#)
- [Textbook](#)
- [Practice Problems](#)

## **Statistical Mechanics (Pre-req: Quantum Mechanics I, Differential Equations):**

**Which Majors Take This Class:** Physics

- [Lectures \(Stanford\)](#)
- [Lectures \(Cal Tech\)](#)
- [Practice Problems \(With Solutions\)](#)