

Fundamentals of Physics IV

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NAGOYA U-G30 FUNDAMENTALS OF PHYSICS COURSES

Book / WileyPlus: Halliday, Fundamentals of Physics, 10e

- **Fundamentals of Physics I**

- Newton mechanics – mostly linear motion

- **Fundamentals of Physics II**

- Rotational motion & static equilibrium

- Thermodynamics; Gravitation; Oscillations

- **Fundamentals of Physics III**

- electromagnetism

- **Fundamentals of Physics IV**

- Waves and optics

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My contributions



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FUNDAMENTALS OF PHYSICS IV

Last of a series of four courses on fundamentals of physics

Introduces mechanical, sound, EM **waves and optics**

Contents

- 1- Review of **Mechanical Oscillations** (ch 15)
- 2- Introduction to **EM Oscillations** (ch 31)
- 3- **Waves** (travelling, standing, interference, Doppler) (ch 16-17)
- 4- Introduction to **Maxwell's Equations** (ch 32)
- 5- **Electromagnetic Waves** (ch 33)
- 6- **Optics** (e.g. Index, Refraction, Polarization, Huygens) (ch 33)
- 7- **Images** (mirrors, refracting surfaces, lenses) (ch 34)
- 8- **Interference, Diffraction** (ch 35-36)