

TABLE OF CONTENTS

Licensing

1: Charges and Conductors

- 1.1: Prelude to Electric Charges and Fields
- 1.2: Electric Charge
- 1.3: Conductors, Insulators, and Charging by Induction

2: Electric Fields

- 2.1: Coulomb's Law
- 2.2: Electric Field
- 2.3: Calculating Electric Fields of Charge Distributions
- 2.4: Electric Field Lines

3: Electric Potentials

- 3.1: Prelude to Electric Potential
- 3.2: Electric Potential Energy
- 3.3: Electric Potential and Potential Difference

4: Current and Resistance

- 4.1: Prelude to Current and Resistance
- 4.2: Electrical Current
- 4.3: Model of Conduction in Metals
- 4.4: Resistivity and Resistance
- 4.5: Ohm's Law
- 4.6: Electrical Energy and Power
- 4.7: Superconductors

5: Direct Current Circuits

- 5.1: Prelude to Direct-Current Circuits
- 5.2: Electromotive Force
- 5.3: Resistors in Series and Parallel

6: Magnetic Fields

- 6.1: Prelude to Magnetic Forces and Fields
- 6.2: Magnetism and Its Historical Discoveries
- 6.3: Magnetic Fields and Lines
- 6.4: Force and Torque on a Current Loop
- 6.5: The Hall Effect

7: Electromagnetic Waves

- 7.1: Prelude to Electromagnetic Waves
- 7.2: Maxwell's Equations and Electromagnetic Waves
- 7.3: Plane Electromagnetic Waves
- 7.4: Energy Carried by Electromagnetic Waves

- [7.5: The Electromagnetic Spectrum](#)

[Index](#)

[Glossary](#)

[Detailed Licensing](#)