

## CHAPTER OVERVIEW

### 9: Electromagnetic Induction

In this and the next several chapters, you will see a wonderful symmetry in the behavior exhibited by time-varying electric and magnetic fields. Mathematically, this symmetry is expressed by an additional term in Ampère's law and by another key equation of electromagnetism called Faraday's law. We also discuss how moving a wire through a magnetic field produces an emf or voltage.

[9.1: Prelude to Electromagnetic Induction](#)

[9.2: Faraday's Law](#)

[9.3: Lenz's Law](#)

[9.4: Motional Emf](#)

[9.5: Induced Electric Fields](#)

[9.6: Eddy Currents](#)

[9.7: Electric Generators and Back Emf](#)

[9.8: Applications of Electromagnetic Induction](#)

[9.A: Electromagnetic Induction \(Answers\)](#)

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