

CHAPTER OVERVIEW

8: Sources of Magnetic Fields

In this chapter, we examine how magnetic fields are created by arbitrary distributions of electric current, using the Biot-Savart law. Then we look at how current-carrying wires create magnetic fields and deduce the forces that arise between two current-carrying wires due to these magnetic fields. We also study the torques produced by the magnetic fields of current loops. We then generalize these results to an important law of electromagnetism, called Ampère's law.

- [8.1: Prelude to Sources of Magnetic Fields](#)
- [8.2: The Biot-Savart Law](#)
- [8.3: Magnetic Field due to a Thin Straight Wire](#)
- [8.4: Magnetic Force between Two Parallel Currents](#)
- [8.5: Magnetic Field of a Current Loop](#)
- [8.6: Ampère's Law](#)
- [8.7: Solenoids and Toroids](#)
- [8.8: Magnetism in Matter](#)
- [8.A: Sources of Magnetic Fields \(Answers\)](#)
- [8.E: Sources of Magnetic Fields \(Exercise\)](#)
- [8.S: Sources of Magnetic Fields \(Summary\)](#)

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