

CHAPTER OVERVIEW

Module 5 - Electromagnetic Optics

Module 5: Electromagnetic Optics provides a comprehensive understanding of light as an electromagnetic phenomenon. Students will begin with Maxwell's equations, exploring their role in describing the generation and propagation of electromagnetic waves. This module also covers boundary conditions at material interfaces, the Poynting theorem for energy flow, and electromagnetic wave behavior in dielectric media. It delves into monochromatic EM waves, emphasizing their mathematical representation and physical properties. Key topics include absorption, dispersion, and the interaction of light with matter.

This module has 2 classes.

[Class 17 - Maxwell equations, Boundaries Conditions, Poynting theorem, EM waves in a dielectric medium](#)

[Class 18 - Monochromatic EM waves, absorption and dispersion](#)

[Module 5 - Summary](#)

[Multi-choice questions](#)

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