



Electronic Properties of Materials

MATSCEN 6777

Credit Hours:

2.00 - 2.00

Course Levels:

Graduate (5000-8000 level)

Course Components:

Lecture

Course Description:

In-depth analysis of the structure - property relationships and application of materials in electronics, optics and magnetics.

Prerequisites and Co-requisites:

Prereq: Grad standing in Engineering or Science, or permission of instructor.

Course Goals / Objectives:

- Understand the fundamental chemical and physical bases for the properties that are observed
 - Have an appreciation for how these properties are used in electronic, optical and magnetic devices
 - Recognize how materials research and development in these areas can result in improved properties
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Course Topics:

- The Physics of Solids
 - Engineering Electronic Structure
 - Overview of Electronic Devices
 - Deposition Techniques & Defects
 - Semiconductor Alloys
 - Organic Semiconductors
 - Magnetic Materials
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Designation:

Elective

Required