EEE 539—Fall 2013

Tentative Syllabus

This course covers the theoretical techniques used to determine the important parameters needed to utilize materials within electronic devices. It provides the basic understanding of band structure, phonon dispersion, the electron-phonon interaction, and an introduction to carrier transport.

1. Introduction
2. Electronics Structure (band theory of semiconductors)
3. Phonon Dynamics (phonon dispersion in semiconductors)
4. The Electron-Phonon Interaction
5. Carrier Transport

Prerequisites include EEE 352 and 434, or equivalents.