



THE OHIO STATE UNIVERSITY
COLLEGE OF ENGINEERING

Semiconductor Device Characterization and Modelling Lab

ECE 5537

Credit Hours:

4.00

Course Levels:

Undergraduate (1000-5000 level)

Graduate (5000-8000 level)

Course Description:

Laboratory course in material characterization, device fabrication, testing and modeling.

Prerequisites and Co-requisites:

3030; or grad standing in Engineering or Physics

Course Goals / Objectives:

- Students master electronic devices (field effect transistors) characterization techniques.
 - Students master optoelectronic devices (light emitting diodes) characterization techniques.
 - Students are exposed to design and modeling of the electronic and optoelectronic devices.
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Course Topics:

- MOS and HEMT capacitors
 - Transistor IV characteristics
 - Compact Modelling
 - Epitaxial design and mask design
 - Contacts and transport
 - Breakdown and RF Modeling and Final Lab
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Designation:

Elective