Course Topics

EEE 598: Technology Computer Aided Design

**Prerequisites:** EEE 436 (or equivalent), 433 (recommended) and basic knowledge of solid state physics, semiconductor devices, and circuits

**Course Description:** Introduction to numerical modeling of semiconductor devices (diodes, capacitors, transistors) with TCAD device simulation software. Mixed mode simulation, design optimization, reliability and extreme environmental effects modeling

**Course Topics:**

- Semiconductor Device Physics
- Photo-diodes
- Solar Cells
- Optoelectronic Applications
- Varactors
- Tunable Filters
- Transistors
- Amplifiers
- References
- Memory
- Power Applications
- Advanced Devices
- Device and Mixed Mode Simulation.