

Special Topics Course
EE 4000-2 Microwave Theory and Devices

Fall 2008

Microwave engineering has become a considerably important subject to both military and commercial sectors. Because of the short wavelengths, the standard circuit theory cannot be directly used at microwave frequencies. Instead, microwave devices have to be handled as distributed elements.

The object of the course is to study microwave theory and to learn skills to design and analyze devices at microwave frequencies where lumped circuit element approximations of circuit theory are no longer valid.

Instructor: Dr. DooYoung Hah (578-5532, dyhah@lsu.edu)

Prerequisites: EE 3320 or equivalent

When/where: MWF 3:40-4:30 pm, 215 Tureaud Hall

Textbook: D. M. Pozar, "Microwave Engineering," John Wiley & Sons, 2004, 3rd ed.

Topics

- Introduction to microwave theory and devices
- Review: Electromagnetic theory
- Transmission line theory
- Microwave network analysis
- Transmission lines and waveguides
- Microwave resonators
- Power dividers, directional couplers, and hybrids
- Microwave filters

Note: Not all topics may be covered, and some related material not listed above may be included.

Grading

- Two mid-term tests (25% each)
- Final exam (35%)
- Home assignments (10%)
- Attendance (5%)