

# Syllabus for Microwave Design Lab

## ECE 6361 – Summer 2012

### Class Description:

Course	Title	Cr Hrs	Instructor	Days	Time	Location
ECE-6361	Microwave Design Lab	3	Greg Durgin	M W	1:20 to 2:30pm	Van Leer C456

### ECE 6361 Microwave Design Lab

This lab and lecture series explores the design of microwave circuitry for use in radio systems. The lecture component provides first-principles discussions of microwave circuits and their applications. In the laboratory, the students build several demonstrative projects to complement their knowledge. Both active and passive, linear and nonlinear components will be explored as well as their uses in communications and other radio systems.

### Lectures:

Van Leer 341  
Gregory D. Durgin  
Office: 507 Van Leer  
Office Hours: TBD  
E-mail: [durgin@ece.gatech.edu](mailto:durgin@ece.gatech.edu)  
Office Phone: (404) 894-2951  
<http://www.propagation.gatech.edu/ECE6361>

### Teaching Assistant:

Van Leer 554  
Muhammad “Bashir” Akbar ([makbar7@gatech.edu](mailto:makbar7@gatech.edu))

### Measurement Lab:

Van Leer C-345  
Lab Director : Dr. Brewer ([tom.brewer@ece.gatech.edu](mailto:tom.brewer@ece.gatech.edu))

### Assembly Lab:

Van Leer C-352 (Mr. Steinberg: [js489@mail.gatech.edu](mailto:js489@mail.gatech.edu))

### Textbook:

*RF and Microwave Circuit and Component Design for Wireless Systems*, by Kai Chang, Inder Bahl, and Vijay Nair, John Wiley and Sons, ISBN 0-471-19773-4. (optional)

### Prerequisites:

ECE6360 Microwave Design (suggested)

### Software:

You will need to establish an account to use Agilent ADS through [help@ece.gatech.edu](mailto:help@ece.gatech.edu). You may use another tool of your choice if you prefer. Eagleware tools will be installed on the lab computers.

## **Grading:**

15% Laboratory Assignments – There will be several short laboratory assignments that will allow students to get familiar with microwave test & measurement equipment.

60% Projects – There will be approximately 3 group design projects that involve the construction of working microwave components. Part of this grade will involve peer evaluation within groups. **Late assignments or projects are not accepted.**

15% Midterms – Two individual quizzes during the semester.

10% Final – Groups present and demonstrate their designs working together.

**Tentative Lecture Topics:** Look online for a rolling list of course topics.

**Honor Code:** The Honor Code applies to every aspect of this class, with only one noteworthy exception: student discussion of concepts and techniques for solving assignments is permitted and even encouraged outside the classroom. However, *all submitted work must be original.*