

## **Ph.D. Graduate Qualifying Courses by ECE Group (as of January 2006)**

### **Computer Engineering:**

- (S)-ECE 251-Advanced Digital System Design (Marinos)
- (F)-ECE 252- Advanced Computer Architecture I (Board, Kedem, Lebeck, Sorin)
- (F)-ECE 255- Mathematical Methods for Systems Analysis I (Trivedi)
- (F)-ECE 261-CMOS VLSI Design Methodologies (Chakrabarty)

### **Microsystems**

- (F)-ECE 211- Quantum Mechanics (Brown, Stiff-Roberts)
- (F)-ECE 216-Semiconductor Devices for Integrated Circuits (Massoud)
- (F)-ECE 261-CMOS VLSI Design Methodologies (Chakrabarty)
- (S)-ECE 262-Analog Integrated Circuit Design (Morizio)

### **Optical Systems**

- ECE 299x- Introduction to Photonics (TBD)
- (F)-ECE 226-Optoelectronic Devices (Stiff-Roberts, Jokerst/Brooke)
- (S)-ECE 273-Optical Communication Systems (Joines)

### **Sensing and Waves**

- (F)-ECE 271-Electromagnetic Theory (Carin, Joines, Liu)
- (S)-ECE 275-Microwave Electronic Circuits (Joines)
- ECE 277-Computational Electromagnetics (Carin, Liu)
- (F)-ECE 299x-Sensing Theory (Carin)

### **Signal Processing**

- (F)-ECE 281-Random Signals and Noise (Collins, Nolte, Krolik)
- (F or S)-ECE 282-Digital Signal Processing (Collins, Tantum)
- (S)-ECE 285-Signal Detection and Extraction Theory (Nolte)