

PhD Concentration Area Courses

BIOMEDICAL IMAGING

ECE 5213 Digital Signal Processing
ECE 5273 Digital Image Processing
ECE 5363 Optical Engineering
ECE 5403 Linear Systems Analysis
ECE 5523 Random Signals
ECE 5843 Medical Imaging Systems
ECE 5853 Biomedical Signals and Systems
ECE 5863 Bioinstrumentation
ECE 5973 Medical Imaging Informatics

COMMUNICATIONS

ECE/TCOM 5123 Wireless Communications
ECE 5403 Linear Systems Analysis
ECE 5513 Communication Theory
ECE 5523 Random Signals
ECE/TCOM 5583 Information Theory

COMPUTERS

ECE 5213 Digital Signal Processing
ECE 5433 Measurement and Automation
ECE 5463 Advanced Computer Architecture
ECE 5523 Random Signals
ECE 5623 Computer Hardware Design
ECE 5833 VLSI Digital System Design
ECE 5873 Advanced VLSI Design & Applications
ECE 5973 Algorithms for Scalable Multicore Computing

CONTROLS

ECE 5213 Digital Signal Processing
ECE 5223 Estimation and Identification
ECE 5403 Linear Systems Analysis
ECE 5413 Control Theory
ECE 5433 Measurement and Automation
ECE 5523 Random Signals
ECE/TCOM 5583 Information Theory
ECE 6973 Advanced Robust and Optimal Controls

POWER

ECE 5213 Digital Signal Processing
ECE 5403 Linear Systems Analysis
ECE 5413 Control Theory
ECE 5973 Power System Protection
ECE 5973 Power System Dynamics and Simulation
ECE 5973 Power System and Market Operation

RADAR

ECE 5213 Digital Signal Processing
ECE 5523 Random Signals
ECE 5643 RF & Microwave Engineering
ECE 5653 Digital Radar Systems
ECE/METR 5663 Radar Engineering
ECE/METR 5673 Weather Radar Theory and Practice
ECE/METR 5683 Weather Radar Applications
ECE 5693 Antennas
ECE 5703 EM Fields and Wave Propagation
ECE 5723 Radar Signal Processing
ECE 5733 RF & Microwave Filters
ECE 5973 Radar Cross Sect Engineering
ECE 5973 RF & Microwave Systems
ECE 6613 Weather Radar Polarimetry

SIGNAL PROCESSING

ECE 5213 Digital Signal Processing
ECE 5223 Estimation and Identification
ECE 5273 Digital Image Processing
ECE 5403 Linear Systems Analysis
ECE 5413 Control Theory
ECE 5433 Measurement and Automation
ECE 5513 Communication Theory
ECE 5523 Random Signals
ECE/TCOM 5583 Information Theory
ECE 5723 Radar Signal Processing
ECE 5843 Medical Imaging Systems
ECE 5853 Biomedical Signals and Systems

SOLID STATE ELECTRONICS

ECE 5303 Solid State Electronics I
ECE 5313 Semiconductor Material and Device
Characterization
ECE 5323 Opto-electronics I
ECE 5343 Quantum Structures and Devices
ECE 5383 Integrated Circuit Fabrication Technology

TELECOMMUNICATIONS

ECE/TCOM 5123 Wireless Communications
TCOM 5272 TCOM Laboratory
ECE/TCOM 5533 Telecom Industry Overview
ECE/TCOM 5543 Telecom Network Design and Mgmt
ECE/TCOM 5553 Telecommunications Technology
ECE/TCOM 5563 Computer and Communications Security
ECE/TCOM 5573 Optical Systems and Networks
ECE/TCOM 5583 Information Theory
ECE/TCOM 5593 Free Space Optics
ECE 5643 RF & Microwave Engineering
TCOM 5879/ECE 5973 Emerging Topics in LTE-A and 5G
ECE/TCOM 5973 Wireless Networks and Standards
ECE 5973 RF Microelectronics