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 Applied Statistics
ECE 5973 Medical Imaging Informatics

COMMUNICATIONS
ECE 5123 Wireless Communications
ECE 5403 Linear Systems Analysis
ECE 5513 Communication Theory
ECE 5523 Random Signals
ECE 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
ECE 5973 Artificial Neural Networks
ECE 5973 Computer Vision

POWER & 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 5583 Information Theory
ECE 5973 Power System and Market Operation
ECE 5973 Power System Dynamics and Simulation
ECE 5973 Power System Protection
ECE 6973 Advanced Robust and Optimal Controls

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 Phased Array Antennas
ECE 5973 Radar Cross Sect Engineering
ECE 5973 Radar Imaging
ECE 5973 RF & Microwave Circuits
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 5583 Information Theory
ECE 5723 Radar Signal Processing
ECE 5843 Medical Imaging Systems
ECE 5853 Biomedical Signals and Systems
ECE 5973 Artificial Neural Networks
ECE 5973 Computer Vision

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

TELECOMMUNICATIONS
ECE 5123 Wireless Communications
ECE 5153 LTE Advanced and 5G
ECE 5553 Telecommunications Technology
ECE 5583 Information Theory
ECE 5593 Free Space Optics
ECE 5970 Advanced Machine Learning
ECE 5970 Complex Systems and Networks
ECE 5970 Internet of Things
ECE 5970 Machine Learning for Engineers
ECE 5973 Artificial Neural Networks
ECE 5973 Deep Learning
ECE 5973 Emerging Topics in LTE-A and 5G
ECE 5973 RF Microelectronics
ECE 5973 Wireless Networks and Standards