

Wireless and Network Engineering, MS

Overview

The Master of Science in Wireless and Network Engineering is administered by the Institute for the Wireless Internet of Things and the Department of Electrical and Computer Engineering. This program is aimed at preparing highly qualified researchers and a specialized workforce that will lead the future of our hyperconnected society. The program will provide students with the necessary knowledge and skills to understand, design, and implement present and future wireless and wired communication networks through a combination of coursework, master thesis research, and/or industry experience.

Program Requirements

Core Requirements

Code	Title	Hours
Complete two of the following:		8
EECE 5576	Wireless Communication Systems	
EECE 7364	Mobile and Wireless Networking	
EECE 7374	Fundamentals of Computer Networks	

Options

COURSEWORK OPTION

Code	Title	Hours
Complete 24 semester hours from the course list below. (p. 1)		24

THESIS OPTION

Code	Title	Hours
EECE 7990	Thesis	8
Complete 16 semester hours from the course list below. (p. 1)		16

Course List

Code	Title	Hours
Electrical and Computer Engineering		
EECE 5155	Wireless Sensor Networks and the Internet of Things	
EECE 5360	Combinatorial Optimization	
EECE 5610	Digital Control Systems	
EECE 5612	Statistical Inference: An Introduction for Engineers and Data Analysts	
EECE 5640	High-Performance Computing	
EECE 5641	Introduction to Software Security	
EECE 5643	Simulation and Performance Evaluation	
EECE 5644	Introduction to Machine Learning and Pattern Recognition	
EECE 5645	Parallel Processing for Data Analytics	
EECE 5666	Digital Signal Processing	
EECE 5693	Electromagnetic Devices for RF and Wireless Communications	
EECE 5697	Acoustics and Sensing	
EECE 5698	Special Topics in Electrical and Computer Engineering (GNSS Signal Processing)	
EECE 5698	Special Topics in Electrical and Computer Engineering (Network Programming)	
EECE 5699	Computer Hardware and System Security	
EECE 7200	Linear Systems Analysis	
EECE 7202	Electromagnetic Theory 1	
EECE 7204	Applied Probability and Stochastic Processes	
EECE 7205	Fundamentals of Computer Engineering	
EECE 7242	Integrated Circuits for Mixed Signals and Data Communication	
EECE 7245	Microwave Circuit Design for Wireless Communication	
EECE 7247	Radio Frequency Integrated Circuit Design	
EECE 7275	Antennas and Radiation	
EECE 7336	Digital Communications	

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EECE 7337	Information Theory
EECE 7345	Big Data and Sparsity in Control, Machine Learning, and Optimization
EECE 7352	Computer Architecture
EECE 7398	Special Topics (Wireless Networks Systems and Applications)
EECE 7398	Special Topics (Terahertz Communications)
EECE 7398	Special Topics (An Experimental Approach to Wireless Communications)
EECE 7400	Special Problems in Electrical and Computer Engineering

Computer Science

CS 5520	Mobile Application Development
CS 5610	Web Development
CS 6620	Fundamentals of Cloud Computing
CS 6650	Building Scalable Distributed Systems
CS 7610	Foundations of Distributed Systems

Cybersecurity

CY 6740	Network Security
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Program Credit/GPA Requirements

32 total semester hours required

Minimum 3.000 GPA required