MASTER OF SCIENCE IN ELECTRICAL ENGINEERING (MSEE)

COMMUNICATION, NETWORKING, AND SIGNAL PROCESSING TRACK* OPTIONS

Curriculum Program of Study
Advisor: Dr. R. Sankar

Name		**USF ID #**	
Term/Year			
Address			
Phone			
Email			
Advisor			
Areas of focus: Communications (Systems/Wireless Communications), Networking, and Digital Signal Processing (Speech/Biomedical/Image/Video and Multimedia)			

Course Title	Number	Credits	*Semester*	*Grade*
1. Mathematics: 6 hours				
Random Process in Electrical Engineering	EEE 6545	3		
Select one other from the following				
Linear and Matrix Algebra	EEL 6935	3		
Optimization Methods	EEL 6935	3		
Statistical Inference	EEL 6936	3		
Engineering Apps for Vector Analysis**	EEL 6027	3		
Engineering Apps for Complex Analysis**	EEL 6022	3		
2. Focus Area Core Courses: 15 hours (Select a major core with 2 sets of sequences from groups A or B and a minor core (one course from the other group)				
A. Communications and Networking				
Digital Communication Systems	EEL 6534	3		
Mobile and Personal Communication	EEL 6593	3		
Broadband Communication Networks	EEL 6506	3		
Wireless Network Architectures and Protocols	EEL 6597	3		
Wireless Communications Lab	EEL 6592	3		
B. Signal Processing				
Digital Signal Processing I	EEE 6502	3		
Digital Signal Processing II	EEL 6752	3		
Speech Signal Processing	EEL 6586	3		
Deep Learning	EEL 6935	3		
Real-Time DSP Systems Lab (DSP/FPGA Lab)	EEL 6722C	3		
3. Electives: 3 hours				
A. Communications, Networking, and Signal Processing				
Selected Topics in Communications	EEL 7931	3		
Network Science	EEL 6935	3		
Wireless Sensor Networks	EEL 6935	3		
Digital Signal Processing III	EEL 6753	3		
Biomedical Image Processing	EEE 6514	3		
Data Analytics for Electrical and System Engineers	EEL 6935	3		
Biomedical Systems and Pattern Recognition	EEE 6282	3		
Advanced Data Analytics	EEL 6935	3		

B. Digital Design				
Embedded Systems	EEL 6935	3		
Rapid System Prototyping	EEL 6729	3		
System on a Chip	EEE 6412	3		
C. Interdisciplinary (Courses include, but not limited to)				
Data Networks, Systems and Security	EEL 6935	3		
Cryptography and Data Security	EEL 6935	3		
Wireless Mobile Computing and Security	EEL 6935	3		
Advanced Antenna Theory	EEL 6463	3		
RF & MW Circuits I	EEL 6426	3		
Biomedical Optical Spectroscopy and Imaging	EEE 6217	3		
Digital Control Systems	EEL 6630	3		
Time Series Analysis	STA 6876	3		
Algebraic Graph Theory	MAD 5305	3		
Introduction to Theory of Algorithms	COT 6405	3		
Data Mining	CAP 5771	3		
4. Thesis/Coursework Options:				
Thesis Option: 6 hours	EEL 6971	6		
Non-Thesis Option: 6 hours of additional Electives, or Independent Study, or Project.		6		

		Total Credits Outside of EE
		Total Credits Independent Study
		Total Credits (30 required)

* Tracks are for student benefit only. They will not show on transcripts or diplomas.

**This course is no longer offered but will be recognized for credit if previously taken.