

**MASTER OF SCIENCE IN ELECTRICAL ENGINEERING (MSEE)**

**MICROELECTRONICS TRACK\* OPTIONS**

*Curriculum Program of Study Advisor Dr. Morel*

<b>Name</b>		<b>USF ID #</b>	
<b>Term/Year Admitted</b>			
<b>Address</b>			
<b>Phone</b>			
<b>Email</b>			
<b>Advisor</b>			
<b>Areas of focus: Electronic Materials and Devices</b> <b>Optional Focus areas: Photovoltaics, Biomaterials and Devices, Nano Electronics</b>			

<b>Course Title</b>	<b>Number</b>	<b>Credits</b>	<b>Semester</b>	<b>Grade</b>
<b>1. Mathematics: 6 hours</b>				
Linear and Matrix Algebra	EEL 6935	3		
Numerical Methods and Partial Differential Equations	EEL 6935	3		
Optimization Methods	EEL 6935	3		
Statistical Inference	EEL 6936	3		
Random Processes	EEE 6545	3		
Engineering Apps for Vector Analysis**	EEL 6027	3		
Engineering Apps for Partial Diff. Eq. **	EEL 6023	3		
Engineering Apps of Complex Analysis **	EEL 6022	3		
<b>2. Microelectronics Core: 12hours(choose any four courses)</b>				
Physical Basis of Microelectronics	EEL 5382	3		
Integrated Circuit Technology	EEE 5356	3		
Integrated Systems Technologies	EEE 6357	3		
Semiconductor Device Theory I	EEL 6353	3		
Semiconductor Device Theory II	EEL 6354	3		
MEMS I/Chem Bio Sensors	EEE 6276	3		
MEMS II	EEE 6278	3		
<b>3. Electives: 6 hours</b>				
System on a Chip	EEE 6412	3		
Analog CMOS/VLSI Design	EEL 6357	3		
Introduction to Nanotechnology	EEL 6936	3		
Compound Semiconductor Technology	EEL 6355	3		
Characterization of Semiconductors	EEE 6318	3		
Flexible Electronics & Thin-Film Solar Cells	EEL 6935	3		
<b>4. Thesis/Coursework Options:</b>				
Thesis Option: 6 hours	EEL 6971	6		
Non-Thesis Option: 6 hours of project, additional electives or independent study		6		
			<b>Total Credits Outside EE</b>	
			<b>Total Credits Independent Study</b>	
			<b>Total Credits (30 required)</b>	

\*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.