Nanoengineering (MR): Nanoelectronics and Nanophotonics Concentration

Degree Requirements

Code	Title	Hours
Core Courses		**12**
Select four of the following courses:		
MSE 500	Modern Concepts in Materials Science	
MSE 565	Introduction to Nanomaterials	
MSE 791	Nonferrous Alloys	
ECE/CHE 568	Conventional and Emerging Nanomanufacturing Techniques and Their Applications in Nanosystems	
ISE 718	Micro/Nano-Scale Fabrication and Manufacturing	
MAE 536	Micro/Nano Electromechanical Systems	

Code	Title	Hours
Concentration Requirement Courses		**12**
Select a minimum of four of the following courses:		
ECE 530	Physics of Semiconductors	
ECE/BME 518	Wearable Biosensors and Microsystems	
ECE/MSE 589	Solid State Solar and Thermal Energy Harvesting	
ECE 723	Optical Properties Of Semiconductors	
CHE 560	Chemical Processing of Electronic Materials	
MSE 760	Materials Science in Processing of Semiconductor Devices	
MSE 771	Materials Science of Nanoelectronics	
Technical Electives		**6**
"Technical Electives" are approved in conjunction with the academic committee *		
Total Hours		**30**

* "Technical Electives" may be ones in the MNAE program not used to satisfy other degree requirements or other technical courses approved by the Director of Graduate Program, Nanoengineering.

Full Professors

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Associate Professors

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Wenpei Gao

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Practice/Research/Teaching Professors

Claude Lewis Reynolds Jr.

Emeritus Faculty

Elizabeth Carol Dickey

Career Opportunities

Nanotechnological advancements have impacted every technological sector and ultimately may change aspects of our daily lives.
The development of these new technologies requires innovative nanoengineers who are invested in the fields of electronics, materials, chemical technology, biotechnology and biomedical engineering.
Graduates of the Master of Nanoengineering program are equipped with a solid foundation in nanoscience and nanotechnology necessary for the development of new products and procedures.

Potential careers associated with nanoengineering are as follows.

- Research and development engineer/scientist
- Biomedical engineer
- Materials engineer/scientist
- Bioinformatics
- Chemist
- Process engineer
- Materials analyst
- Professor
- Medical doctor
- PhD student