MASTER OF SCIENCE IN NUCLEAR ENGINEERING

The graduate program in nuclear and radiological engineering/medical physics leads to the degrees of

- Master of Science in Nuclear Engineering,
- Master of Science in Medical Physics,
- Master of Science, and
- Doctor of Philosophy.

In nuclear and radiological engineering, students with a bachelor's degree in engineering pursue the Master of Science in Nuclear Engineering degree, while students with a Bachelor of Science degree in other fields enroll for the Master of Science degree. Depending on the career objectives of the student, the Woodruff School may encourage a thesis as part of the Master of Science program. Nuclear and radiological engineering students must earn a graduate grade-point average of at least 3.0 and satisfy all remaining requirements to be certified for the master's degree.

Non-Thesis requirements

Code	Title	Credit Hours
NRE 6101	Transport Fundamentals	3
NRE 6756	Radiation Physics	3
NRE 6401	Advanced Nuclear Engineering Design	3
Select one:		3
NRE 6102	Plasma Physics	
NRE 6201	Reactor Physics	
NRE 6301	Reactor Engineering	
NRE 6757	Radiation Detection	
NRE Elective		3
Math Elective		3
Electives		12
Total Credit Hours		**30**

Thesis requirements

Code	Title	Credit Hours
NRE 6101	Transport Fundamentals	3
NRE 6756	Radiation Physics	3
Select one:		3
NRE 6102	Plasma Physics	
NRE 6201	Reactor Physics	
NRE 6301	Reactor Engineering	
NRE 6757	Radiation Detection	
NRE Elective		3
Math Elective		3
Electives		6
NRE 7000	Master's Thesis	9
Total Credit Hours		**30**

Nuclear Enterprise Management option (Non-thesis)

Code	Title	Credit Hours
NRE 6101	Transport Fundamentals	3
NRE 6401	Advanced Nuclear Engineering Design	3
NRE 6756	Radiation Physics	3
Select one:		3
NRE 6102	Plasma Physics	
NRE 6201	Reactor Physics	
NRE 6301	Reactor Engineering	
NRE 6757	Radiation Detection	
Math Elective:		3
NRE 6103	Computational Methods of Radiation Transport	
NRE/ME 6758	Numerical Methods in Mechanical Engineering	
NRE 6504	Management of the Nuclear Enterprise	3
ME/MGT 6753	Principles of Management for Engineers	3
NEM Elective:		3
Any ISYE, MGT 6000-level or higher course		
Electives		6
Total Credit Hours		**30**

Nuclear Enterprise Management option (Thesis)

Code	Title	Credit Hours
NRE 6101	Transport Fundamentals	3
NRE 6756	Radiation Physics	3
Select one:		3
NRE 6102	Plasma Physics	
NRE 6201	Reactor Physics	
NRE 6301	Reactor Engineering	
NRE 6757	Radiation Detection	
Math Elective:		3
NRE 6103	Computational Methods of Radiation Transport	
NRE/ME 6758	Numerical Methods in Mechanical Engineering	
NRE 6504	Management of the Nuclear Enterprise	3
ME/MGT 6753	Principles of Management for Engineers	3
NEM Elective:		3
Any ISYE, MGT 6000-level or higher class		
NRE 7000	Master's Thesis	9
Total Credit Hours		**30**