NUCLEAR ENGINEERING, M.S.

The Graduate School has general requirements for M.E., M.S., and Ph.D. students that must be met by all degree candidates (including earning at least 30 credit hours beyond the bachelor's degree for master's degrees and at least 60 credit hours beyond the bachelor's degree for doctoral degrees). The Department of Mechanical Engineering has added requirements (some of which are described below) that must be met before students can complete their degrees. Consult the department for complete, current requirements.

Learning Outcomes

1. Students will demonstrate knowledge in the fundamental subject areas of nuclear engineering.
2. Students will demonstrate the ability to execute a research or development project in a specific area of interest.

Degree Requirements (30 Hours)

A Nuclear Engineering M.S. student must complete 24 hours of graded graduate courses and 6 hours of thesis credit leading to a thesis.

Course	Title	Credits
Required Core Courses		
EMCH 552	Introduction to Nuclear Engineering	3
EMCH 553	Nuclear Fuel Cycles	3
EMCH 757	Radiation Shielding	3
or EMCH 557	Introduction to Radiation Shielding and Sources	
EMCH 758	Nuclear Reactor Systems	3
or EMCH 558	Introduction to Nuclear Reactor Systems	
Nuclear Engineering Electives		**9**
Nuclear engineering electives are approved by a student's advisor and include the following.		
EMCH 555	Instrumentation for Nuclear Engineering	
EMCH 550	Introduction to Nuclear Safeguards	
EMCH 573	Introduction to Nuclear Materials	
EMCH 754	Thermal Hydraulic Design of Nuclear Reactors	
EMCH 755	Advanced Nuclear Engineering	
EMCH 756	Safety Analysis for Energy Systems	
EMCH 759	Waste Management in the Nuclear Industry	
EMCH 770	Predictive Modeling: Combining Experiments with Computations	
EMCH 772	Nuclear Materials	
EMCH 774	Radiation Damage	
Engineering Elective		**3**
Engineering electives are approved by a student's advisor and include the following:		
Any Nuclear Engineering Elective (from above)		
Any Engineering course at 500 level or higher		
Other courses as approved by the student's advisor and graduate director		
Thesis		**6**
EMCH 799	Thesis Preparation	
Total Credit Hours		**30**