

# NUCLEAR ENGINEERING MATERIALS, CERTIFICATE

## REQUIREMENTS

Code	Title	Credits
<b>Required courses (4 credits - must be taken for a letter grade)</b>		
N E/M S & E 423	Nuclear Engineering Materials <sup>1</sup>	3
N E 424	Nuclear Materials Laboratory	1
<b>Elective courses (minimum 12 credits - must be taken for a letter grade)</b>		
CIV ENGR 445	Steel Structures I	3
CIV ENGR 447	Concrete Structures I	3
E M A 303	Mechanics of Materials	3
M S & E 330	Thermodynamics of Materials	4
M S & E 352	Materials Science-Transformation of Solids	3
M S & E/N E 433	Principles of Corrosion	3
M S & E 460	Introduction to Computational Materials Science and Engineering	3
M S & E/M E 462	Welding Metallurgy	3
M S & E 463	Materials for Elevated Temperature Service	3
M S & E 570	Properties of Solid Surfaces	3
N E 541	Radiation Damage in Metals	3
N E 545	Materials Degradation in Advanced Nuclear Reactor Environments	3

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Because M S & E 350 Introduction to Materials Science or M S & E 351 Materials Science-Structure and Property Relations in Solids are prerequisites for N E/M S & E 423 Nuclear Engineering Materials, students are expected to take one of the two of these courses as prerequisites for the certificate.

## CERTIFICATE COMPLETION REQUIREMENT

This undergraduate certificate must be completed concurrently with the student's undergraduate degree. Students cannot delay degree completion to complete the certificate.