

NUCLEAR THERMAL SYSTEMS ANALYSIS CERTIFICATE

The Nuclear Thermal Systems Analysis certificate provides a more in-depth education of thermal systems principles related to nuclear industries. The certificate promotes thermal system understanding of nuclear systems for mechanical engineers or closely related majors.

About this Program

- **College:** Herbert Wertheim College of Engineering (<http://catalog.ufl.edu/UGRD/colleges-schools/UGENG/>)
- **Credits:** 10 | Completed with minimum grades of C

Certificates must contain at least nine credits of coursework that are unique to that program out of all other certificates and minors.

Department Information

The Department of Materials Science and Engineering strives to serve the scientific and engineering community of the state and nation by providing quality education in the field, conducting basic and applied research to enhance science in the field, and supplying short courses, technology transfer, industrial consulting, and distance learning to promote engineering in the field.

Website (<https://mse.ufl.edu/>)

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Map (<http://campusmap.ufl.edu/#/index/0184>)

Curriculum

- [/UGRD/colleges-schools/UGENG/NRA_BS/](#)
- Advanced Engineering Ceramics Certificate
- Biomaterials Certificate
- Combination Degrees
- Materials Science and Engineering
- Materials Science and Engineering Minor
- Metallurgical Engineering Certificate
- Nuclear and Radiological Engineering Minor
- Nuclear Engineering
- Nuclear Radiation and Reactor Analysis Certificate
- Nuclear Thermal Systems Analysis Certificate
- Polymer Science and Engineering Certificate
- Semiconductor Materials Certificate

Prerequisites

Code	Title	Credits
CHM 2045 or CHM 2095	General Chemistry 1 ¹ Chemistry for Engineers 1	3
CHM 2046 or CHM 2096	General Chemistry 2 ¹ Chemistry for Engineers 2	3
MAC 2311	Analytic Geometry and Calculus 1 ¹	4
MAC 2312	Analytic Geometry and Calculus 2 ¹	4
MAC 2313	Analytic Geometry and Calculus 3 ¹	4
MAP 2302	Elementary Differential Equations ¹	3
PHY 2048	Physics with Calculus 1 ¹	3
PHY 2049	Physics with Calculus 2 ¹	3
MAP 4305	Differential Equations for Engineers and Physical Scientists ¹	3
Select one:		3
EML 3007	Elements of Thermodynamics and Heat Transfer	
EML 3100	Thermodynamics	

EML 4140	Heat Transfer	
ENU 4605	Radiation Interactions and Sources 1 ¹	4

¹ Minimum grade of C required.

Required Courses

Code	Title	Credits
EGN 3353C	Fluid Mechanics	3
ENU 4134	Reactor Thermal Hydraulics	4
ENU 4144	Nuclear Power Plant Reactor Systems 1	3
Total Credits		10
