

## LEGACY OF EXCELLENCE. FUTURE FOCUSED.



Dr. Michele Manuel  
Department Chair, Rolf  
E. Hummel Professor of  
Electronic Materials

The Department of Materials Science and Engineering at the University of Florida is the top-ranked program in the state and is one of the oldest in the country.

The department offers a hands-on approach to engineering steeped in a foundation of theoretical and science education that bridges engineering, chemistry and physics. The goal is to educate well-rounded and successful engineers through design labs where students work on solving real problems facing society.

The department is ABET-accredited and offers bachelor's and graduate degrees in Materials Science and Engineering. The department offers students an opportunity to specialize in a specified material through a certificate option. In addition, the department is looking toward the future of engineering by expanding our nuclear materials, biomaterials, computational materials, and artificial intelligence research areas.

**#10**

MATERIALS SCIENCE &  
ENGINEERING DEPARTMENT  
RANKING AMONG PUBLIC  
UNIVERSITIES

**#2**

IN THE COUNTRY FOR MOST FEMALE  
FACULTY IN MATERIALS SCIENCE &  
ENGINEERING DEPARTMENT

**6**

NUMBER OF NEW FACULTY  
HIRES IN 2019 AND  
GROWING

**39**

NUMBER OF TENURED AND  
TENURE-TRACK RESEARCH  
FACULTY IN THE DEPARTMENT



Information sourced (from left): U.S. News & World Report;  
Departmental Resources; U.S. News & World Reports; ASEE

## HIGHLIGHTS



### CERTIFICATES

Undergraduate and graduate students can pursue a certificate in biomaterials, ceramics, electronic materials, metals or polymers.



### EQUIPMENT

Students are trained on industry-standard equipment such as electron microscopes, 3D printers, and computational materials analysis tools.



### DISTANCE LEARNING

Students can participate in the online program, EDGE, to earn a master's degree from afar. The Gator Nation is and can be everywhere.

**10**

ENDOWED  
PROFESSORSHIPS

These professorships are the result of donors who prioritize research and want to help attract and retain top faculty. Thanks to a **\$1 Million gift** in 2018, the department added two new named professorships honoring the legacy of the department founder, Dr. Frederick "Fred" Rhines and two early faculty, Robert DeHoff and Larry Hench.

### DEPARTMENT OF MATERIALS SCIENCE & ENGINEERING RESEARCH CENTERS & INSTITUTES

- ▶ Research Service Centers (RSC)
- ▶ Center for Molecular Magnetic Quantum Materials (M2QM)
- ▶ HiPerGator (UF High Performance Computing Center)
- ▶ Center for Particulate and Surfactant Systems (CPaSS)
- ▶ Multi-functional Integrated System Technology (MIST) Center

## ENERGY SOLUTIONS. POWERING TOMORROW.



Dr. Andreas Enqvist  
Nuclear Engineering  
Program Director

The Nuclear Engineering Program is housed within the Herbert Wertheim College of Engineering's Department of Materials Science and Engineering at the University of Florida.

The program offers students an opportunity to work on research teams related to backscatter radiography, extreme environments testing and nuclear fuel

cycles. Students conduct research alongside academics and in partnership with national labs and government agencies.

The department offers ABET-accredited bachelor's degree in Nuclear Engineering and graduate degrees in Nuclear Engineering Sciences.

**#14**

NUCLEAR ENGINEERING  
GRADUATE PROGRAM  
AMONG PUBLIC  
UNIVERSITIES

**\$1M**

AWARDED IN FUNDING FROM DOE  
AND INMM FOR 2 EARLY CAREER  
FACULTY RESEARCH PROJECTS

**\$6M**

GRANT PROJECT  
BEING CONDUCTED  
WITH ARPA-E

**10**

NUMBER OF TENURED AND TENURE-  
TRACK RESEARCH FACULTY  
IN THE NE PROGRAM



Information sourced (from left): U.S. News & World Report;  
Departmental Resources; ASEE

### Partnerships

Argonne National Laboratory; Idaho National Laboratory; Oak Ridge National Laboratory; Pacific Northwest National Laboratory; United States Department of Energy; United States Department of Defense; Nuclear Energy University Program;

### Research Areas

- ▶ Nuclear Materials
- ▶ Radiation Detection and Imaging
- ▶ Reactor Physics
- ▶ Nuclear Security, Safeguards and Nonproliferation
- ▶ Fusion and Plasma Physics
- ▶ Thermal Hydraulics

### Research Facilities

The Nuclear Engineering Program offers hands-on experience through its research labs. Facilities include the reactor, hot cell, hot-scanning electron microscope - focused ion beam tool, hot transmission electron microscopy, microstructural characterization, radiation instrumentation and mechanical testing laboratories. Below are five popular labs for students to gain knowledge and one of our newest labs that will expand our nuclear proliferation research.

- ▶ **University of Florida Training Reactor (UFTR)**
- ▶ **Nuclear Fuels and Materials Characterization (NFMC) Laboratory - a Nuclear Science User Facility (NSUF)**
- ▶ **HiPerGator (UF High Performance Computing Center)**
- ▶ **Laser and Optics Laboratory**