The University of Florida Training Reactor (UFTR)

Powering Nuclear Education & Innovation

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UF Nuclear Engineering Program

People

- Seven (7) Primary Faculty
- Five (5) Affiliate Faculty
- 100 Enrolled Undergraduates
- 40 Masters and Doctoral Students

Facilities

- UF Training Reactor (UFTR)
- Uranium Metal-Fueled Sub-Critical Facility
- High-Output Fusion Neutron Generator Irradiation Laboratory
- 1 and 10 Curie Pu-Be Neutron Sources
- Radiochemistry Lab with Hot Cell & Decontamination Capabilities
- Neutron Activation Analysis (NAA) Lab
- Multi-User Nuclear Instrumentation Lab
UFTR Design

- Training and nuclear research
- Light water and graphite moderate, graphite reflected modified Argonaut-type reactor
- Licensed for 100 kWth power operation
UFTR Upgrade

Multi-Year Refurbishment and Upgrade

• Low enrichment (LEU) fuel
• Nuclear instrumentation systems
• HVAC system process instrumentation
• Physical security systems
• Reactor instrumentation & control (I&C) systems
• Ongoing digital I&C upgrade

Expect continued operation for 40+ years!
UFTR Training & Services

Training Population
• UF community
• External academic institutions
• Government
• Corporate (including future reactor operators)

Services
• Neutron Activation Analysis (NAA)
• Neutron Irradiation
• Radiation Effects Testing on Materials
• Research Partnerships
UFTR Courses

• Reactor Operations Lab
  • Hands-on training on reactor operations
  • In-depth exercises on reactivity and reactivity feedback effects
• Reactor Experiments Lab
  • Approach to critical
  • Neutron flux
  • Neutron Activation Analysis (NAA)

• Radiation Detection Lab
  • Detection of ionizing radiation, sources & electronics

• Neutronics Lab
  • Production and detection of neutrons