

The University of Florida Training Reactor (UFTR)

Powering Nuclear Education & Innovation

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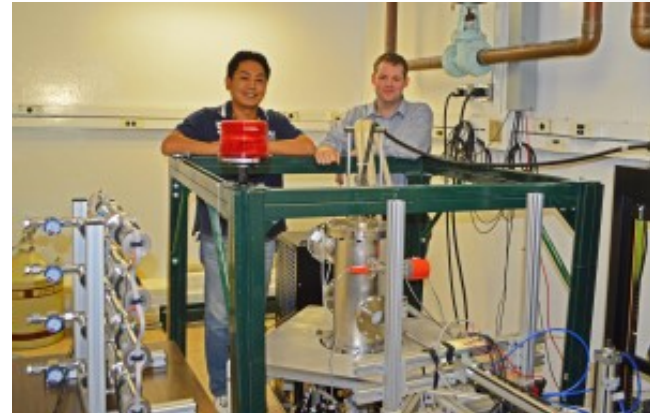
Florida Energy Systems Consortium (FESC) Workshop - May 20, 2015



UF Nuclear Engineering Program

People

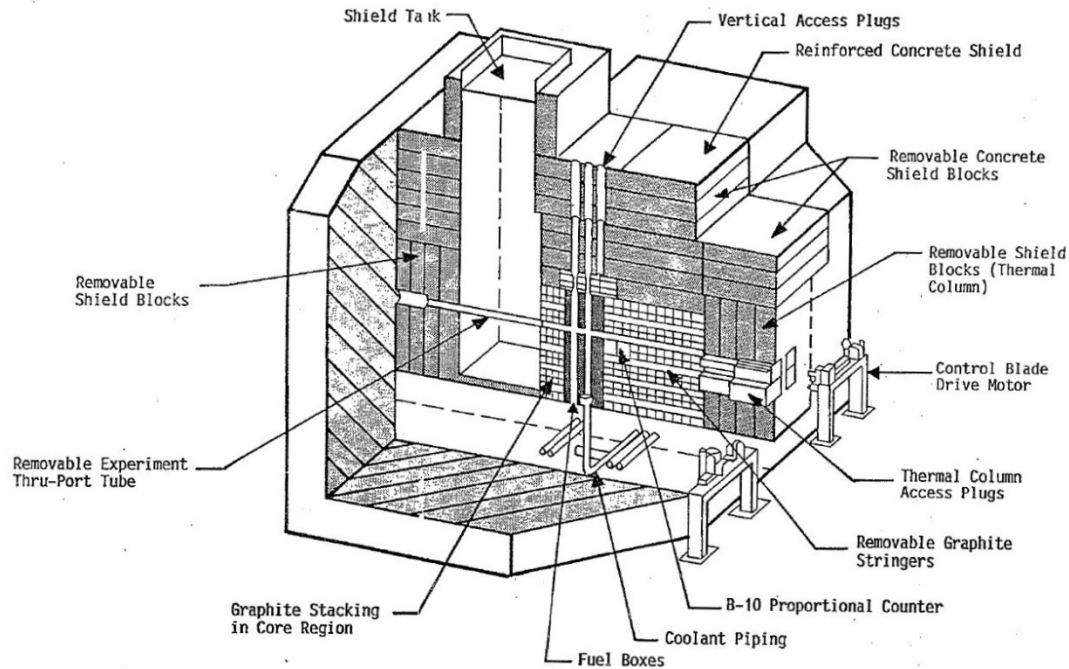
- Seven (7) Primary Faculty
- Five (5) Affiliate Faculty
- 100 Enrolled Undergraduates
- 40 Masters and Doctoral Students



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!



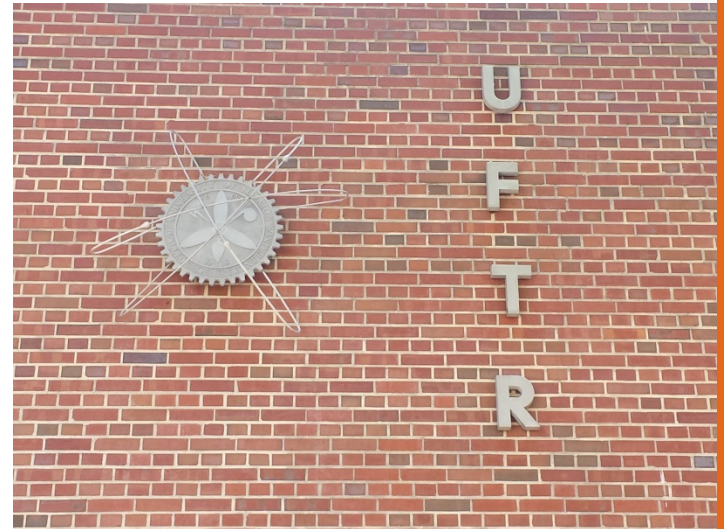
UFTR Training & Services

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