Educational Activities at the Nuclear Engineering Teaching Laboratory
Do You Ever Feel This Way?

“Mr. Osborne, may I be excused? My brain is full.”
University of Texas Location

Downtown Austin Texas

UT-Austin
Main Campus
NETL Location
What Does NETL Have?

- TRIGA Mark II Research Reactor (1.1 MW)
- 14 MeV Neutron Generator
- Radiochemistry Lab
- Neutron Activation Analysis Lab
- Gamma Spectroscopy Lab
- Conference room, classroom, offices.
- Other stuff.

A Typical University Research Facility
Why Do We Do Education?

- It’s part of our Mission Statement
  - Educate the next generation of leaders in nuclear science and engineering.
  - Conduct leading research at the forefront of the international nuclear community.
  - Apply nuclear technology for solving multidisciplinary problems.
  - Provide service to the citizens of Texas, the U.S., and the international community.
- It’s also part of our name
  - Nuclear Engineering Teaching Laboratory
How Do We Accomplish the Education Mission?

- Hands-on education in reactor physics and nuclear science.
- Laboratory course work in nuclear science and related fields such as physics, chemistry, and biology.
- Continuing education for nuclear professionals.
- Public education.
University Degree Programs

- The NETL is integrated in the Nuclear and Radiation Engineering program of the Mechanical Engineering Department at the University of Texas at Austin.
- This program has both undergraduate and graduate programs.
Courses That Use NETL

**Undergraduate**
- ME 136N: Concepts in Nuclear and Radiological Engineering
- ME 337C: Introduction to Nuclear Power Systems
- ME 337F: Nuclear Environmental Protection
- ME 361E: Nuclear Operations and Reactor Engineering
- ME 361F: Radiation and Radiation protection Laboratory

**Graduate**
- ME 388C: Nuclear Power Engineering
- ME 388N: Design of Nuclear Systems I
- ME 389C: Nuclear Environmental Protection
- ME 390F: Nuclear Analysis Techniques
- ME 390G: Nuclear Engineering Laboratory
- ME 390T: Nuclear- and Radiochemistry
NETL Classes on Main Campus

- NETL is located about 10 miles north of the main campus of UT-Austin.
- How do you get students in a classroom on main campus to NETL?

“Remote Console” allows classes on main campus to participate in reactor experiments at NETL.
One month institute for sophomores and juniors majoring in technical fields outside of nuclear engineering.
Credit hours extended to participants.
Students study fundamental nuclear engineering concepts, and gain hands-on experience at the reactor and other experimental facilities.
Education program for Nuclear Regulatory Commission personnel.

IAEA Fellowship programs.

- Fellows and Visiting Scientists spend 3-6 months at the NETL.
NETL routinely provides short courses or tours for special interest groups such as the Boy Scouts of America, public schools, emergency responders, and other groups.
A traditional university research facility can have a significant educational component.