DEPARTMENT OF NUCLEAR ENGINEERING

Nuclear Engineering

Nuclear engineering deals with the application and utilization of nuclear processes and radiation. The use of nuclear energy for the production of electrical power is a mature industry. Nuclear engineers work on all aspects of the nuclear fuel cycle and for many different types of employers such as government and private labs, regulatory agencies, reactor vendors, utilities and architect engineers. In addition, nuclear energy for space applications is a rapidly expanding field. Radionuclide technology in industry and medicine requires a large number of well-trained radiological health engineers. To supply qualified engineers, the Department of Nuclear Engineering offers curricula leading to the Bachelor of Science degree in Nuclear Engineering and is accredited by the Engineering Accreditation Commission of ABET, www.abet.org.

The missions of the Department of Nuclear Engineering are:

- to produce high-quality graduates from the undergraduate through the doctoral levels to help meet the technical manpower needs of our state, region, nation, and the international community;
- to conduct research, including collaboration with research in related fields, to advance the state of knowledge in these disciplines in support of the needs of society; and
- to perform service in these disciplines for many constituencies including our College and University, industry, government and national laboratories, professional organizations, and the public.

In fulfilling these missions, the objective of the undergraduate program is to prepare students for success in their professional endeavors following the baccalaureate degree. These endeavors may include direct employment in the private or public sectors, graduate studies in engineering or science, professional studies in medicine, business, law or public administration, service in the military, or entrepreneurial activities. To achieve this purpose, four principal educational objectives are identified. Graduates of our Bachelor of Science program in Nuclear Engineering:

1. will work on the challenges of maintenance, improvement, innovation, education, and research in nuclear power and industrial utilization of nuclear radiation and radionuclides. In this work, they will fulfill independent assignments, engage in collaborations, and manage the work of others with effective communications characterizing all phases of their responsibilities;
2. will conduct their professional activities with full recognition of the choices and challenges implicit to their work, to its ethical dimensions, and to their implications for matters beyond their immediate tasks;
3. will take the local, global, historical, social, economic, and political settings into account in both their domestic and international endeavors; and
4. will recognize and utilize both the accumulated body of results from prior work and the continuing evolution of science and technology as essential resources for the effective conduct of their work.

The nuclear engineering baccalaureate degree programs stress engineering science fundamentals and mathematics. However, considerable numbers of elective hours are available in the curriculum to permit students to broaden their educations as desired.

Most of the facilities used in the MS and PhD programs are also used in the undergraduate degree programs. These facilities make the Department of Nuclear Engineering one of the best equipped in the United States. Texas A&M is now the only University in the United States with two nuclear reactors on its campus.

Before commencing course work in the major, students must be admitted to the major or have the approval of the department.

Faculty

Adams, Marvin L, Professor
Nuclear Engineering
PHD, University of Michigan at Ann Arbor, 1986

Ahmed, Karim E, Assistant Professor
Nuclear Engineering
PHD, Purdue University, 2015

Chirayath, Sunil S, Associate Professor
Nuclear Engineering
PHD, University of Madras, 2005

Fiorina, Carlo, Associate Professor
Nuclear Engineering
PHD, Politecnico di Milano, 2013

Ford, John R, Associate Professor
Nuclear Engineering
PHD, University of Tennessee, 1992

Hassan, Yassin A, University Distinguished Professor and Regents Professor
Nuclear Engineering
PHD, University of Illinois, 1980

Hecker, Siegfried, Professor Of The Practice
Nuclear Engineering
PHD, Case Western Reserve University, 1968

Kimber, Mark L, Associate Professor
Nuclear Engineering
PHD, Purdue University, 2008

Kirkland, Karen V, Professor
Nuclear Engineering
PHD, The University of Tokyo, 1999

Kurwitz, Richard C, Instructional Professor
Nuclear Engineering
PHD, Texas A&M University, 2009

Marianno, Craig M, Associate Professor
Nuclear Engineering
PHD, Oregon State University, 2000

McDeavitt, Sean M, Professor
Nuclear Engineering
PHD, Purdue University, 1992

Miller, Warren, Professor of the Practice
Nuclear Engineering
PHD, Northwestern University, 1973

Morel, Jim E, Professor
Nuclear Engineering
PHD, The University of New Mexico, 1979

Naqvi, Farheen, Research Assistant Professor
Nuclear Engineering
PHD, Institut fur Kemphysik, 2011

Nastasi, Michael, Professor
Nuclear Engineering
PHD, Cornell University, 1986

Peddicord, Kenneth L, Senior Professor
Nuclear Engineering
PHD, University of Illinois, 1972

Ragusa, Jean C, Professor
Nuclear Engineering
PHD, Institut National Polytechnique de Grenoble, France, 2002

Shao, Lin, Professor
Nuclear Engineering
PHD, University of Houston, 2001

Tsvetkov, Pavel V, Associate Professor
Nuclear Engineering
PHD, Texas A&M University, 2002

Tsvetkova, Galina V, Senior Lecturer
Nuclear Engineering
PHD, Texas A&M University, 2003

Waer, Richard, Associate Professor of the Practice
Nuclear Engineering
BS, University of Arizona, 1989

Majors

- Bachelor of Science in Nuclear Engineering (http://catalog.tamu.edu/undergraduate/engineering/nuclear/bs/)

Minors

- Nuclear Engineering Minor (http://catalog.tamu.edu/undergraduate/engineering/nuclear/minor/)
- Radiological Health Engineering Minor (http://catalog.tamu.edu/undergraduate/engineering/nuclear/radiological-health-minor/)