DEPARTMENT OF NUCLEAR ENGINEERING

https://engineering.tamu.edu/nuclear/index.html (https://engineering.tamu.edu/nuclear/)

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The nuclear engineer applies radiation and energy from nuclear sources to fields such as electricity generation, space craft propulsion, sterilization, food processing, industrial measurements and medical diagnostic and therapeutic treatments. Nuclear engineering is based on the principles of nuclear physics that govern radioactivity, fission and fusion; the production of heat and radiation in those processes; and the interaction of radiation with matter. The function of the nuclear engineer is to apply these principles to a wide range of challenging technological problems.

The Department of Nuclear Engineering offers the Master of Engineering, Master of Science and Doctor of Philosophy degrees. The department offers courses for all degrees and faculty supervision for students pursuing the Master of Science and Doctorate of Engineering degree. Admission to nuclear engineering requires a bachelor's degree in engineering, chemistry, mathematics, physics or other related areas. Some nuclear physics background is highly desirable. Mathematics through differential equations is required but prefer through Linear Algebra.

The department does not have a foreign language requirement for the Ph.D. program. Successful completion of a departmental qualifying exam is required as well as a published a journal paper submitted and accepted by the editor prior to scheduling your final defense.

Research opportunities are varied, with emphasis on nuclear fuels, solid/ion interactions, particle transport, large-scale scientific computing, materials and extreme environments, reactor safety, design of advanced nuclear reactors, thermal hydraulics, computational fluid mechanics, reactor kinetics and control, plutonium disposition, radiation interactions with living tissue, dosimetry and medical radionuclides.

The department offers a wide variety of facilities for instructional and research purposes. These include a well-equipped radiation measurements laboratory, a sub-critical reactor laboratory, access to a supercomputer facility and a University-wide UNIX network, a departmental computer facility including interconnected UNIX and Windows workstations with an extensive software library, a radiochemistry laboratory, thermal hydraulics laboratories, materials research laboratories, an AGN-201M low-power nuclear reactor, five low-energy ion accelerators and a large TRIGA research reactor located at the Texas A&M University Nuclear Science Center. An 88-inch cyclotron is also available for research in nuclear physics and engineering at the Cyclotron Institute.

Discover More About Our Program Here! (https://engineering.tamu.edu/nuclear/)

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

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PHD, Texas A&M University, 2009

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Nuclear Engineering
PHD, Oregon State University, 2000

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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
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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

Masters

- Master of Engineering in Nuclear Engineering (http://catalog.tamu.edu/graduate/colleges-schools-interdisciplinary/engineering/nuclear/meng/)
- Master of Science in Nuclear Engineering (http://catalog.tamu.edu/graduate/colleges-schools-interdisciplinary/engineering/nuclear/ms/)

Doctoral

- Doctor of Philosophy in Nuclear Engineering (http://catalog.tamu.edu/graduate/colleges-schools-interdisciplinary/engineering/nuclear/phd/)

Certificates

- Nuclear Security Certificate (http://catalog.tamu.edu/graduate/colleges-schools-interdisciplinary/engineering/nuclear/nuclear-engineering-certificate/)