

MECHANICAL ENGINEERING

GRADUATE PROGRAM FACT SHEET

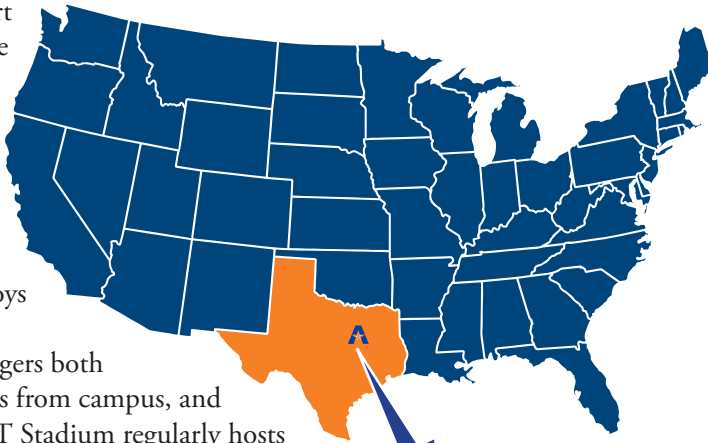
Why pursue a graduate degree in MECHANICAL ENGINEERING at The University of Texas at Arlington?

UTA's mechanical engineering program allows students to enhance technical competence in areas of mechanical engineering practice; explore design, development, research, experimentation, and/or analysis in joint efforts with faculty and peers; enter career fields allied with the mechanical engineering discipline; and complete coursework for programs leading to careers that require interdisciplinary competence. To meet the educational goal of a broad-based technical background in mechanical engineering, each student will obtain in-depth knowledge in at least two areas. The department's growth is aided by high levels of research funding from NSF, DOE, ONR, DOD and other federal, industrial and state sources in the areas of design, manufacturing and multidisciplinary optimization, structural mechanics and optimization and thermal science and energy systems.

An Ideal Location

UTA is located in the heart of the Dallas/Fort Worth area of North Texas – the fourth-largest metropolitan area in the United States. The region has one of the highest concentrations of corporate headquarters in the nation, and just minutes from campus, DFW International Airport and several interstate highways allow easy access to global collaboration and commerce.

There's plenty to do here: the NFL's Dallas Cowboys and Major League Baseball's Texas Rangers both play about two miles from campus, and the Cowboys' AT&T Stadium regularly hosts blockbuster concerts and other major events. There's an excellent music scene in Dallas and Fort Worth, and plenty of shopping, outdoor recreation and entertainment options throughout the region. The weather's great too: on average, Arlington enjoys 235 sunny days each year, with an average July high of 95 degrees (31°C) and an average January low of 35 degrees (1°C).



Degrees

- Ph.D. in Mechanical Engineering
- M.S. and M.Eng. in Mechanical Engineering
- Fast Track M.S. in Mechanical Engineering
- B.S. to Ph.D. in Mechanical Engineering

Student Composition and Diversity

U.S. News and World Report rated UTA as the 5th-most diverse university in the United States in 2017. The University is an Hispanic-serving institution and is one of the 40 most popular U.S. colleges and universities for international students, based on data from the Institute of International Education's 2014-15 Open Doors Report.

How to Apply

Begin your application today at: <https://engineeringcas.liasoncas.com/applicant-ux/#/login>. Be sure to check application deadlines and include all of the required application materials and fees.

Financial Assistance

All applications for admission will be also be considered for assistantships, fellowships, and scholarships. Complete your application early to take advantage of all opportunities for financial aid.

Who Hires Our Graduates?

Graduates of the department work at many companies in the region and around the nation, including Lockheed Martin, Bell Helicopter Textron, Facebook, Yahoo, Boeing, General Motors, and many others.

Learn More

For more information about Mechanical Engineering at UTA, visit our website at uta.engineering/me or contact a graduate advisor:

Ratan Kumar, Ph.D. (*last names A-M*)
Seiichi Nomura, Ph.D. (*last names N-Z*)

817-272-2500

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An impactful research university

Dramatic, measurable advancements continue to propel UTA toward its goal of becoming one of the nation's premier research institutions. The University is designated an R-1 Carnegie "highest research activity" institution, putting it in an elite group of 115 institutions, including Harvard, MIT, and Johns Hopkins. The College of Engineering accounts for nearly half of the university's research expenditures each year, with funding from the National Science Foundation, Department of Defense, National Institutes of Health, Department of Energy, and others. Since 2012, the College's research expenditures have risen from \$25.6 million to \$32.3 million. Overall, UTA's engineering-related expenditures topped \$48.8 million last year. Twelve members of the UTA faculty, including eight engineering faculty, are Fellows of the National Academy of Inventors and one is a Fellow of the National Academy of Engineering.

Current Research

Haiying Huang's current research projects include using sensors for smart medical devices, high-temperature monitoring, simultaneous strain and temperature measurement, ultrasound/acoustic emissions and 3-D surface profiling for material damage diagnosis and prognosis.



Ankur Jain was awarded a \$500,000 National Science Foundation CAREER grant to develop a fundamental understanding of how heat flows in materials within a Li-ion battery.



Ashfaq Adnan recently was awarded a three-year, \$613,079 grant from the Office of Naval Research to show the potential link between blast-like trauma and neurological disorders such as post-traumatic stress disorder, Alzheimer's disease and Chronic Traumatic Encephalopathy, or CTE.



Dereje Agonafer is developing a novel a multidimensional heat transfer system that is capable of sub-ambient heat transfer while minimizing the room required for cooling stacks of silicon chips that are interconnected and stacked to create 3-D packaging.



State-of-the-Art Research Facilities

Electronic MEMS and Nanoelectronics Systems Packaging Center

The EMNSPC is a first-class research center meeting the needs of industry through research, education and training, with a focus on microelectronics, MEMS and nanoelectronics (with a special emphasis on thermomechanical issues) as a fundamental research area.

Advanced Sensor Technology Laboratory

Research in the Advanced Sensor Technology Laboratory (ASTL) focuses on developing state-of-the-art sensor technologies for structural health monitoring and bio-medical applications.

Integrated Micro/Nanofluidics Laboratory

The Integrated Micro/Nanofluidics Laboratory works toward novel methods to control fluidic motion in the micro and nanoscale. Research aims at integration of control principles to build systems for disease diagnostics, chemical or biological analytic processes, or heat transfer.

Institute for Predictive Performance Methodologies

The Institute for Predictive Performance Methodologies specializes in heterogeneous materials including polymer, metal, and ceramic-based composites. This is enabling technology for modern design and risk control methods such as supervisory control, zero maintenance, and certain nuclear nonproliferation strategies.

Microscale Thermophysics Laboratory

The Microscale Thermophysics Laboratory carries out research around the theme of microscale thermal transport in engineering devices and systems, including energy conversion, heat transfer and temperature measurement in extreme conditions.

Multiscale Mechanics and Physics Laboratory

The Multiscale Mechanics and Physics Laboratory investigates multiscale mechanical behavior of engineered and biological materials to develop advanced materials for structural/biomedical applications and predict failure and fracture properties of nano/biomaterials.