MECHANICAL ENGINEERING is one of the broadest engineering disciplines. Mechanical engineers design, develop and analyze objects and systems with motion. These creative individuals work in areas such as automotive and aircraft design, electric power generation, controls, HVAC, the biomedical industry, nanotechnology, and energy and the environment. A mechanical engineering perspective is critical in modern society, whether the challenge is creating a functional prosthetic arm or designing a pollution control system.

UNDERGRADUATE PROGRAMS Students receive a strong foundation in mathematics and the physical sciences of chemistry and physics, followed by an in-depth education in thermal science, fluids engineering, mechanics and materials, dynamics and controls and mechanical design. The valuable problem-solving techniques learned here can be applied toward an engineering career or to higher education in the areas of engineering, law, medicine, and business administration.

GRADUATE PROGRAMS The majority of M.S.M.E. and Ph.D. graduates find employment in private industry or in government laboratories and academia. Recent graduates have been employed by Sandia Labs, Chrysler, GM, John Deere, Texas Instruments, Shell Research, BP Amoco, Weber Aircraft, Apple Computer, Applied Materials, and Caterpillar.

Master of Science in Mechanical Engineering
The department offers the three master’s program options: thesis, report, and coursework only. Focus areas of study include solid mechanics, thermofluids and heat transfer, dynamics and controls, and design.

Doctor of Philosophy in Mechanical Engineering
Programs of study are developed by the dissertation advising committee and the student to meet the research objectives. Students should allow a minimum of three years beyond the Master of Science degree to complete this program.

RESEARCH Both faculty and students in Mechanical Engineering at Texas Tech work on a variety of research projects including control and nonlinear control, Experimental, numerical and theoretical Fluid mechanics, engineering design, dynamics and vibration, computational mechanics, nanomaterials, biomaterials, high pressure materials, energetic materials, complex materials, wind energy, bioengineering and biomechanics.

EMPLOYMENT OPPORTUNITIES Graduates with a degree in mechanical engineering will find employment opportunities covering a wide spectrum, including the aerospace, automotive, petroleum production and refining industries; petrochemicals, electrical power, electronics, semiconductors and computers, manufacturing, and production; as well as research positions in industry and government laboratories.

Problem-solving techniques learned in the mechanical engineering curriculum are also applied to continued educational pursuits or graduate study in engineering, as well a variety of other professions.