College of Engineering

Introduction

The University of Texas at El Paso has a long-standing commitment to quality Engineering education. Today, the College of Engineering strives to educate engineers to formulate and solve the technical problems of today and tomorrow.

At the graduate level, the College fulfills its mission by offering graduate degree programs in all of its departments. Master of Science degrees are available in Civil Engineering, Computer Engineering, Computer Science, Electrical Engineering, Environmental Engineering, Industrial Engineering, Manufacturing Engineering, Mechanical Engineering, Metallurgical and Materials Engineering, and Systems Engineering. In addition to these programs, students can pursue an undesignated Master of Science in Engineering, with concentrations in a number of areas; a Master of Engineering degree in Environmental Engineering; or a Master of Science in Information Technology. The College offers a PhD degree in Civil Engineering, a PhD degree in Electrical and Computer Engineering, and a PhD degree in Computer Science. Multi-disciplinary PhD degrees are also awarded in Materials Science and Engineering and Environmental Science and Engineering, and their program descriptions are provided under Interdisciplinary Doctoral Programs.

Doctor of Philosophy in Biomedical Engineering

Doctor of Philosophy in Civil Engineering

The PhD in Civil Engineering is designed to educate engineers, researchers, and scholar/teachers who will address the needs of 21st century engineering infrastructure, to educate professionals who will not only be technically competent in emerging technologies, but also trained to address long-term challenges in transportation, environmental, and urban infrastructure from both global and systemic points of view. Graduates from the program will have the technical background to contribute to improvements in the reliability, maintenance, and management of infrastructure systems.

Doctor of Philosophy in Computer Science

The PhD in Computer Science is a program designed to prepare scientists and engineers to advance the rapidly growing fields of hardware, software, and systems integration, and also to develop the underlying theories and models to underpin further advances. The program emphasizes a thorough grounding in the fundamental principles and practices of computer science, together with the skills necessary to apply them effectively and professionally in a wide range of disciplinary and social contexts.

Doctor of Philosophy Degree in Electrical and Computer Engineering

The PhD in Electrical and Computer Engineering is a program designed to prepare electrical and computer engineers for a meaningful and successful research career in academia, government, or industry. The program emphasizes the advancement of knowledge in theoretical and applied electrical and computing engineering computing that leads to innovation in this and related fields.

Doctor of Philosophy in Environmental Science and Engineering

The PhD in Environmental Science and Engineering is an interdisciplinary doctoral program, coordinated by the Center for Environmental Resource Management (CERM), to prepare scientists and engineers to address the environmental issues facing this region, the nation, and the world. The program emphasizes a cross-disciplinary perspective to the understanding, management, and remediation of human impacts on the environment, with a particular focus on problems of the Southwest Border region. For information regarding admission and degree requirements, students should consult the section for Interdisciplinary Studies.

Doctor of Philosophy in Materials Science and Engineering

The PhD in Materials Science and Engineering is an interdisciplinary doctoral program, coordinated by the Materials Research and Technology Institute (MRTI), to prepare scientists and engineers to address the rapidly expanding opportunities and problems created by emerging materials-related industries. The program emphasizes a cross-disciplinary perspective of this vital field with a range of skills linking materials, structure, properties, synthesis and processing, and performance. For information regarding admission and degree requirements, students should consult the section for Interdisciplinary Studies.

Doctor of Philosophy in Mechanical Engineering

The doctoral program in Mechanical Engineering with emphases in energy, aerospace, and advanced manufacturing. The program will provide a broad-based, integrative education for doctoral students, including design thinking for complex engineered systems, research training in a creative knowledge environment, and research training in a national laboratory or industry setting.

Requirements for Admission into all PhD Degree Programs in Engineering

1. Bachelor’s degree from an accredited institution in the United States or proof of equivalent education in a foreign institution.
2. Undergraduate degree in the same or a related field or a minimum of 15 semester hours of upper-division course work in Engineering.
3. Submission of official Graduate Record Examination (GRE) scores.
4. TOEFL score of 550 or higher for international applicants whose first language is not English or who have not completed a university degree in the U.S. or another English-speaking institution.

5. Depending upon selected areas of concentration, students might need to complete deficiencies in undergraduate coursework.

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Departments and Programs
College of Engineering (Dean's Office)
Go to information for this department. (http://catalog.utep.edu/grad/college-of-engineering/engineering-deans-office/)

Programs
Master of Science
• M.S in Biomedical Engineering (http://catalog.utep.edu/archive/2019-2020/grad/college-of-engineering/metallurgical-materials-engineering/20biomedical-engineering-ms/)

Doctor of Philosophy
• Ph.D. in Biomedical Engineering (http://catalog.utep.edu/archive/2019-2020/grad/college-of-engineering/metallurgical-materials-engineering/20biomedical-engineering-phd/)

Civil Engineering
Go to information for this department. (http://catalog.utep.edu/grad/college-of-engineering/civil-engineering/)

Programs
Master of Engineering in Civil and Environmental Engineering
• Master of Engineering in Civil and Environmental Engineering (http://catalog.utep.edu/archive/2019-2020/grad/college-of-engineering/civil-engineering/environmental-engineering-master-of-engineering/)

Master of Science
• M.S. in Civil Engineering (http://catalog.utep.edu/archive/2019-2020/grad/college-of-engineering/civil-engineering/civil-engineering-ms/)
• M.S. in Construction Management (http://catalog.utep.edu/archive/2019-2020/grad/college-of-engineering/civil-engineering/construction-management-ms/)
• M.S. in Environmental Engineering (http://catalog.utep.edu/archive/2019-2020/grad/college-of-engineering/civil-engineering/environmental-engineering-ms/)

Doctor of Philosophy
• Ph.D. in Civil Engineering (http://catalog.utep.edu/archive/2019-2020/grad/college-of-engineering/civil-engineering/civil-engineering-phd/)

Certificate
• Graduate Certificate in Construction Management (http://catalog.utep.edu/archive/2019-2020/grad/college-of-engineering/civil-engineering/construction-management-graduate-certificate/)

Computer Science
Go to information for this department. (http://catalog.utep.edu/grad/college-of-engineering/computer-science/)
Programs

Master of Science

• M.S. in Computer Science (http://catalog.utep.edu/archive/2019-2020/grad/college-of-engineering/computer-science/computer-science-ms/)
• M.S. in Information Technology (http://catalog.utep.edu/archive/2019-2020/grad/college-of-engineering/computer-science/information-technology-ms/)
• M.S. in Software Engineering (http://catalog.utep.edu/archive/2019-2020/grad/college-of-engineering/computer-science/software-engineering/)

Doctor of Philosophy

• Ph.D. in Computer Science (http://catalog.utep.edu/archive/2019-2020/grad/college-of-engineering/computer-science/computer-science-phd/)

Certificate

• Graduate Certificate in Cyber Security (http://catalog.utep.edu/archive/2019-2020/grad/college-of-engineering/computer-science/cyber-security-graduate-certificate/)

Electrical and Computer Engineering

Go to information for this department. (http://catalog.utep.edu/grad/college-of-engineering/electrical-computer-engineering/)

Programs

Master of Science

• M.S. in Computer Engineering (http://catalog.utep.edu/archive/2019-2020/grad/college-of-engineering/electrical-computer-engineering/computer-engineering-ms/)
• M.S. in Electrical Engineering (http://catalog.utep.edu/archive/2019-2020/grad/college-of-engineering/electrical-computer-engineering/electrical-engineering-ms/)

Doctor of Philosophy

• Ph.D. in Electrical and Computer Engineering (http://catalog.utep.edu/archive/2019-2020/grad/college-of-engineering/electrical-computer-engineering/electrical-computer-engineering-phd/)

Engineering Education & Leadership

Master of Science

• M.S. in Engineering (http://catalog.utep.edu/archive/2019-2020/grad/college-of-engineering/engineering-education-leadership/engineering-ms/)

Industrial, Manufacturing, and Systems Engineering

Go to information for this department. (http://catalog.utep.edu/grad/college-of-engineering/industrial-manufacturing-systems-engineering/)

Programs

Master of Science

• M.S. in Industrial Engineering (http://catalog.utep.edu/archive/2019-2020/grad/college-of-engineering/industrial-manufacturing-systems-engineering/industrial-engineering-ms/)
• M.S. in Manufacturing Engineering (http://catalog.utep.edu/archive/2019-2020/grad/college-of-engineering/industrial-manufacturing-systems-engineering/manufacturing-engineering-ms/)
• M.S. in Systems Engineering (http://catalog.utep.edu/archive/2019-2020/grad/college-of-engineering/industrial-manufacturing-systems-engineering/systems-engineering-ms/)

Certificate

• Graduate Certificate in International Manufacturing Engineering (http://catalog.utep.edu/archive/2019-2020/grad/college-of-engineering/industrial-manufacturing-systems-engineering/international-manufacturing-engineering-graduate-certificate/)
• Graduate Certificate in Systems Engineering (http://catalog.utep.edu/archive/2019-2020/grad/college-of-engineering/industrial-manufacturing-systems-engineering/systems-engineering-graduate-certificate/)

Mechanical Engineering

Go to information for this department. (http://catalog.utep.edu/grad/college-of-engineering/mechanical-engineering/)
Programs

Master of Science

• M.S. in Mechanical Engineering (http://catalog.utep.edu/archive/2019-2020/grad/college-of-engineering/mechanical-engineering/mechanical-engineering-ms/)

Doctor of Philosophy

• Ph.D. in Mechanical Engineering (http://catalog.utep.edu/archive/2019-2020/grad/college-of-engineering/mechanical-engineering/mechanical-engineering-phd/)

Metallurgical and Materials Engineering

Go to information for this department. (http://catalog.utep.edu/grad/college-of-engineering/metallurgical-materials-engineering/)

Programs

Master of Science