

## **Proposed catalog description**

Changes:

RECEIVED OCT 13 2006

APPROVED MAR 21 2007

ITEC 1300 was discontinued and has been replaced by COSC 1304 or ELET 2300

MECT 4375/4175 has been replaced by MECT 4275, MECT 4276

## **Mechanical Engineering Technology (METE)**

This program includes courses that are directed at both computer-aided manufacturing and computer-aided design and drafting. Individuals interested in manufacturing technology apply fundamental principles of mechanical design and manufacturing processes to new and existing manufacturing systems. Courses focus on manufacturing planning and management, automated manufacturing systems, quality control, and robotics. Computer-aided design and drafting is an essential component of the design procedure; courses focus on computer graphics and applied mechanical design.

The goal of the Mechanical Engineering Technology major is to provide students with a well-rounded fundamental and application-oriented education focused on the knowledge of existing and new developments in Mechanical Engineering Technology. Graduates of the baccalaureate degree will develop the theoretical and practical knowledge and skills necessary for appropriate careers in local and national industries. To achieve this mission, the Mechanical Engineering Technology program is committed to attaining the following goals for all students:

- Provide a career-oriented program that prepares students for productive employment.
- Emphasize the latest technological advancements in computer-aided drafting, computer-aided design, and computer-aided manufacturing. Students should be able to apply problem-solving techniques and critical thinking skills at the level required for their professional practice.
- Provide a learning environment that will enable students to interact with state-of-the-art technological equipment and software. Students should gain experience in the application of computer software to analyze and design mechanical systems and automated manufacturing systems.
- Prepare students to pursue graduate degrees and life-long education.

The programs are designed to satisfy the educational needs of the urban Houston community by providing a climate that fosters self-awareness, personal growth, and a desire for lifelong learning.

Students pursuing a major in Mechanical Engineering Technology must complete the following requirements, in addition to university core and general college requirements.

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### **Mechanical Engineering Technology Requirements**

MECT 1364. Materials and Processes I

MECT 2354. Introduction to Mechanics

MECT 3318, 3118. Fluid Mechanics Applications, Laboratory

MECT 3331. Applied Thermodynamics

MECT 3341. Computer-Aided Drafting I

MECT 3342. Computer-Aided Drafting II

MECT 3355, 3155. Strength of Materials, Laboratory

MECT 3358. Dynamics of Mechanisms

MECT 3360. Automated Manufacturing Systems

MECT 3365. Computer-Aided Design I

MECT 3367. Quality Control Technology

MECT 4372, 4172. Materials Technology, Laboratory

MECT 4275, 4276. Senior Design Project I & II

#### Computer-Aided Design and Manufacturing Electives (9 SH)

MECT 3362. Industrial Work Measurement

MECT 4323. Applications in Stress Analysis

MECT 4350. Principles in Mechatronics

MECT 4365. Computer-Aided Design II

MECT 4384. Manufacturing Systems Control

3 SH Mechanical Elective

#### General Technology and College Core Requirements:

CNST 1330. Graphics I

ELET 2307. Electrical-Electronic Circuits

TELS 3340. Organizational Leadership and  
Supervision

*or*

HDCS 3300. Organizational Decisions  
in Technology

TELS 3363. Technical Communications

COSC 1304. C Programming or ELET 2300 Introduction to C++ Programming

Free electives (3 semester hours)

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**Technology and Other Requirements**

Math 14 semester hours which includes university core)

MATH 1310. College Algebra

MATH 1330. Precalculus

MATH 1431. Calculus I

MATH 1432. Calculus II

Natural Sciences (12 semester hours which includes university core)

PHYS 1301, 1101. Introductory General Physics I, Laboratory

PHYS 1302, 1102. Introductory General Physics II, Laboratory

CHEM 1301, 1101. Foundations of Chemistry I, Laboratory

Social Sciences (6 semester hours)

Six semester hours (three must be writing intensive) from core approved list

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**Degree awarded:** Bachelor of Science

**Major:** Mechanical Engineering Technology



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*or*

HDCS 3300. Organizational Decisions  
in Technology

TELS 3363. Technical Communications

TECH 1300. Computers in Technology

Free electives (3 semester hours)

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