

# DEPARTMENT OF ENGINEERING TECHNOLOGY

---

## About

**Chair:** Dr. Faruk Yildiz (fxy001@shsu.edu)

**Contact Information:** (936) 294-1216 OR (936) 294-1191

**Website:** Department of Engineering Technology (<https://www.shsu.edu/academics/engineering-technology/>)

## Mission

The mission of the Engineering Technology Department is to provide educational program designed to provide academic and practical experiences in the areas of management, engineering design, leadership, engineering technology for students to prepare to meet industry challenges and the needs.

## Academic Programs

The Department of Engineering Technology currently **offers only undergraduate degree programs**. See the current undergraduate catalog (<http://catalog.shsu.edu/archives/2021-2022/undergraduate/colleges-academic-departments/science-and-engineering-technology/engineering-technology/>) for more details.

## Engineering Technology

### **ETEC 5369. Spcl Tpcs In Adv Indstrl Tech. 3 Hours.**

This course will examine advanced special topics/issues and (or) subject matter in the field of Industrial Technology. The sub-divisional fields offered are: Industrial Technology, Industrial Management, Design and Development, and Construction. This course may be repeated as topics and subject matter change.

### **ETEC 5390. Directed Studies. 3 Hours.**

This course is designed to provide students with the opportunity to gain specialized experience in one or more of the following areas: Internship, Laboratory Procedures, Individualized Study, Innovative Curriculum, Workshops, Specialized Training Schools, Seminar. In the internship and laboratory procedures segment, the student will gain organization and management techniques through observation and participation in conducting classroom activities and associated laboratory experience. The student may gain experience in a maximum of two areas of competency. In the individualized studies segment, the student will select a problem and work under the direction of a major professor. 1-6 hours, may be repeated or taken concurrently for a maximum of six hours. (Area of study to be indicated on transcript.)

### **ETEC 5398. Hist & Phil Industrial Edu. 3 Hours.**

This course is designed to provide the opportunities for in-depth study of the historical background of the industrial education movement.

### **ETEC 6099. Thesis. 1-3 Hours.**

### **ETEC 6331. Plant Layout And Materials Handling. 3 Hours.**

A study of the methods in planning and control of production; operation analysis; routing; scheduling and dispatching; production charts and boards; inventory control; accumulation of material requirements; and use of critical path techniques used in industry.

### **ETEC 6334. Materials Test Technology. 3 Hours.**

A study of internal stresses and deformation of bodies resulting from the action of external forces; concepts and techniques of testing tensile, compression, shear, transverse, hardness and the elasticity on various materials and fasteners.

### **ETEC 6335. Principles And Techniques Of Research In Industrial Education. 3 Hours.**

A study of the basic principles of research and the techniques of application as related to Industrial Education.

### **ETEC 6398. Thesis. 3 Hours.**

In addition to the preliminary study of the techniques of research, these course involve completion of a bibliography, organization of material, selection of a suitable problem, a digest of related literature, selection of appropriate procedures, formulation of a plan of investigating and reporting, collection and organization of data, and the writing of the thesis.

### **ETEC 6399. Thesis. 3 Hours.**

In addition to the preliminary study of the techniques of research, these course involve completion of a bibliography, organization of material, selection of a suitable problem, a digest of related literature, selection of appropriate procedures, formulation of a plan of investigating and reporting, collection and organization of data, and the writing of the thesis.

### **INED 5310. Adv. Human Relations in CTE. 3 Hours.**

This course is designed to meet the needs of the competent tradesman in understanding and working with students. Parallel course to INED 4310.

### **INED 5365. Adv. Teaching in CTE Industry. 3 Hours.**

Success in most professional areas is dependent in part on the ability of an individual to communicate effectively with others. An inventory of media used in communications will be made. Various means and equipment for aiding the communication of ideas will be studied and evaluated.

**INED 5379. Instruction/Product Analysis. 3 Hours.**

This course is a study of the inventory and analysis procedure by which the essential elements of an occupation or production scheduling activity are identified and listed for instruction or production purposes. The analysis determines the instructional or production format necessary for a smooth and orderly process from the simple to the complex order of tasks, operation and jobs required in the industrial environment.

**INED 5382. Managing CTE Work Programs. 3 Hours.**

.Techniques for identifying students for vocational training; sources and means of job placement for co-operative part-time students and graduates of vocational programs; and methods of making student follow-up studies are included.

**INED 5386. CTE Instructional Technology. 3 Hours.**

This course is designed to aid teachers of industrial subjects in the design and construction of teaching aids. The study of multi-media is an integral and important phase of this course.

**INED 5391. Lab Organization & Management. 3 Hours.**

This course is designed for graduates who are going to teach Industrial Education or manage equipment and supplies in industry. It is to prepare students to successfully manage laboratory activities, organize laboratories in accordance with contemporary concepts, and to control materials/ supplies within their laboratories. Parallel course to INED 4391.

## Industrial Education

**INED 5310. Adv. Human Relations in CTE. 3 Hours.**

This course is designed to meet the needs of the competent tradesman in understanding and working with students. Parallel course to INED 4310.

**INED 5365. Adv. Teaching in CTE Industry. 3 Hours.**

Success in most professional areas is dependent in part on the ability of an individual to communicate effectively with others. An inventory of media used in communications will be made. Various means and equipment for aiding the communication of ideas will be studied and evaluated.

**INED 5379. Instruction/Product Analysis. 3 Hours.**

This course is a study of the inventory and analysis procedure by which the essential elements of an occupation or production scheduling activity are identified and listed for instruction or production purposes. The analysis determines the instructional or production format necessary for a smooth and orderly process from the simple to the complex order of tasks, operation and jobs required in the industrial environment.

**INED 5382. Managing CTE Work Programs. 3 Hours.**

.Techniques for identifying students for vocational training; sources and means of job placement for co-operative part-time students and graduates of vocational programs; and methods of making student follow-up studies are included.

**INED 5386. CTE Instructional Technology. 3 Hours.**

This course is designed to aid teachers of industrial subjects in the design and construction of teaching aids. The study of multi-media is an integral and important phase of this course.

**INED 5391. Lab Organization & Management. 3 Hours.**

This course is designed for graduates who are going to teach Industrial Education or manage equipment and supplies in industry. It is to prepare students to successfully manage laboratory activities, organize laboratories in accordance with contemporary concepts, and to control materials/ supplies within their laboratories. Parallel course to INED 4391.

Director/Chair: **Faruk Yildiz**

Junkun Ma, PHD (jxm158@shsu.edu), *Professor of Engineering Technology, Department of Engineering Technology*, PHD, Univ of Calif-San Diego; MS, N China Electric Power Univ; BE, Tsinghua University

Recayi Pecen, PHD (regpecen@shsu.edu), *Professor of Engineering Technology, Department of Engineering Technology*, PHD, Univ of Wyoming; MS, Univ of Colorado; MSC, Istanbul Univ; BSC, Istanbul Univ

Mahdi Safa, PHD (mxs167@shsu.edu), *Assistant Professor of Engineering Technology, Department of Engineering Technology*, PHD, University of Waterloo; MBA, Wilfrid Laurier University; MASC, Azad University; BS, Azad University

Min Jae Suh, PHD (mjs068@shsu.edu), *Assistant Professor of Engineering Technology, Department of Engineering Technology*, PHD, Virginia Polytechnic&State U; MS, Stanford University; BENG, Yeungnam University

Terrence R Waugh, PHD (trw006@shsu.edu), *Lecturer of Engineering Technology, Department of Engineering Technology*, PHD, Univ of Nebraska-Lincoln; MS, Univ of Nebraska-Omaha; BA, Creighton University

Sumith Yesudasan Daisy, PHD (sxy021@shsu.edu), *Assistant Professor of Engineering Technology, Department of Engineering Technology*, PHD, Syracuse University; MTECH, National Institute of Technolo; BTECH, Univ of Kerala

Faruk Yildiz, DIT (fxy001@shsu.edu), *Professor and Chair of Engineering Technology, Department of Engineering Technology*, DIT, Univ of Northern Iowa; MS, Cuny City Coll; BS, MKH Dulati Taraz State Univ