

Industrial Technology

Mission

The mission of the department is to prepare individuals for technical and management careers in business, industry, agriculture, and government for the improvement of regional and global economy.

The characteristics of the Industrial Technology (IT) curriculum are (a) using technology in teaching and learning; (b) delivering instruction using face-to-face, online, and hybrid modes; (c) engaging in classroom, laboratories, and research units; (d) providing multiple cognitive-channel learning, i.e., audio, visual, and kinesthetic; (e) emphasizing transformational scholarship (culminating experience); (f) developing professional skills such as written and oral, critical thinking, and information literacy; and (g) striving to serve manufacturing, processing, and agricultural industries to achieve desired goals efficiently and with appropriate concern for the environment, ethics, quality, and human diversity.

Career Opportunities

Industrial Technology prepares students for professional careers in business, industry, government and education. Students graduate with technical knowledge in automation technology, geographic information systems (GIS), manufacturing, and quality control, as well as seasoned professional skills.

IT graduates find technical and management jobs with an

average starting salary commensurate with those of engineering or business graduates.

Instructional Facilities

The department's laboratory facilities are some of the most extensive in the California State University system. They include an Advanced Manufacturing Systems Lab, Computer Networking Lab, Computer Aided Design Lab, Process Control Lab, Automotive and Energy Lab, Materials Lab, and Metal Processing Lab.

Student Activities

Student clubs, as noted below, are vital to the success of the department. The clubs provide opportunities for the students to develop leadership and teamwork skills, as well as lifetime friendships.

Enrichment opportunities abound for IT students through student clubs and professional societies. Below are major student clubs:

- Advanced Technology Enterprise (ATE)
- Epsilon Pi Tau (EPT) - Honorary Society
- Fresno State Motorsports
- Alternative Energy Club

Below are professional societies active in the program:

- American Society of Quality (ASQ)
- American Society of Automotive Engineers (SAE)
- Association of Technology, Management and Applied Engineering (ATMAE)
- American Society of Agricultural and Biological Engineers (ASABE)

- International Society of Automation (ISA)
- American Society of Engineering Education (ASEE)
- Sports Car Club of America

Bachelor of Science in Industrial Technology

The Bachelor of Science in Industrial Technology major offers technology oriented courses which are grouped under two categories: technical core and management core. Hands-on, practical learning experience is a major factor that contributes to the success of our graduates. Sciences and math are the foundation for the study of industrial technology.

The program also allows students to learn topical subjects of their interest as electives in one or more areas such as agricultural information systems, automation and control, CAD/CAM, manufacturing, networking, product design, teacher education, transportation, and quality.

Technology Education Teaching Credential Preparation

For undergraduate students seeking to become high school technology teachers, the department offers courses related to the single subject credential program offered by the Kremen School of Education. The department provides methodology and supervision for students enrolled in the fifth year credential program.

California State
University, Fresno

Department
of Industrial
Technology

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www.fresnostate.edu/jcast/indtech/

B.S. in
Industrial Technology

M.S. in
Industrial Technology

Technology
Education Teaching
Credential Preparation

Minor in
Industrial Technology

Minor in Precision
Agriculture
Technology

FRESNO STATE

Discovery. Diversity. Distinction.

Industrial Technology

Certificate Programs

The Department of Industrial Technology offers two certificate programs: (a) Network Routing and Internetworking Technology and (b) Computer Process Control Network Administration.

Bachelor of Science in Industrial Technology

Technical Core (32 units)

Electricity/Electronics
Manufacturing Process
Information Technology
Product Design and Packaging
Energy Conversion and Utilization
Industrial Materials
CAD
Senior Problems
Statistics
Chemistry
Senior Seminar

Management Core (21 units)

Safety Management
Facility Planning and Materials Handling
Quality Assurance
Production Operations
International Quality Systems
Project Management
Advanced Manufacturing Technology

Electives (15 units)

CAD/CAM Systems Management
Industrial Control Systems Management
Quality Systems Management
Transportation Systems Management
Networking Systems Management

Additional Requirements (1 unit)

Students must pass the upper-division writing exam or complete IT 198W with a grade of C or higher (to be taken no sooner than the term in which 60 units are completed)

General Education (51 units)

Total..... 120 units

Master of Science in Industrial Technology

The Master of Science in Industrial Technology is a 30-unit program, which offers graduate studies in Technology Systems Management through selected courses within the department and other disciplines. The program is designed to accommodate students who are employed full-time. This will be accomplished by offering most graduate courses in the late afternoon or evening or online. See program requirements below:

<i>Graduate Core required courses</i>	15
Technology Management	
Research Methodology	
Advanced Communication Systems	
Advanced Materials and Processes	
Advanced Manufacturing Systems	
<i>Electives</i>	12
<i>Thesis or Project</i>	3
Total	30

The Master of Science in Industrial Technology will provide a broad-based program to prepare individuals for

1. technical management positions in business and manufacturing firms and
2. teaching and administrative positions in applied technology.

The program provides a technology-based core of advanced courses in management of technology, materials and processes, manufacturing systems, communication concepts, visual presentation, and research methodology. The selection of elective courses in industrial technology, engineering, business, and /or education will depend on the individual's educational and career objectives.

The individually tailored program will provide an opportunity for students to gain a broader technological expertise, stronger research orientation, and stronger business, oral, and written communication skills. Each of these competencies is needed in both industry and education. The graduates typically find employment as fleet service manager, manufacturing engineering manager, transportation manager, quality engineer manager, and other related positions. The graduates also join high schools, community colleges, technical schools, and four-year educational institutions as instructors.

For additional information, write

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PLEASE NOTE: This document is for general informational purposes only. The information is subject to change; consult the appropriate department or an academic adviser. Entering freshmen must follow the revised General Education program effective fall 1999 and thereafter. The university catalog and schedule of courses are available online at www.fresnostate.edu/ClassSchedule and www.fresnostate.edu/catalog.

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