

## The department

The Engineering Technology and Industrial Studies Department (ETIS) prepares students for a wide range of **technical and managerial positions** in industry and engineering technology. Through nationally accredited programs, a project-based learning environment, and extensive collaboration with industry, the department offers opportunities for students to acquire the technical and scientific knowledge base required for **success in their chosen fields**.

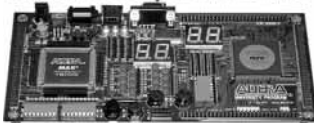
## The program

The Computer Engineering Technology concentration is a **four-year program** that leads to the B.S. degree in Engineering Technology. This fast-growing program offers the opportunity to develop **strong, applied technical skills** in:

- electric and electronic circuits
- digital systems
- computer hardware and software
- local and wide area networks
- microprocessor applications
  - control
  - automation
  - data acquisition
  - data transfer
  - data analysis

The prevalence of computers and their applications in our everyday lives has created a great demand for computer engineering technologists. **Employment opportunities exist in various industrial fields** that require the design and application development for digital computers. These areas include manufacturing; medicine; aerospace; digital instrumentation, control, and measurement; sales; and installation and maintenance of computers and their networks.

Altera FPGA/CPLD Board



**MIDDLE  
TENNESSEE**  
STATE UNIVERSITY

Engineering Technology  
and Industrial Studies Department  
P.O. Box 19  
Middle Tennessee State University  
Murfreesboro, TN 37132

Address Service Requested

Non-Profit  
Organization  
U.S. Postage  
PAID  
Permit 169  
Murfreesboro, TN

MIDDLE TENNESSEE STATE UNIVERSITY

# Computer Engineering Technology

*a concentration within the  
Engineering Technology and  
Industrial Studies Department*

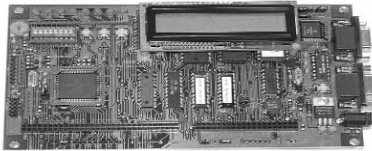


Murfreesboro, Tennessee

The Computer Engineering Technology program offers students the conceptual and working knowledge needed to design, program, install, maintain, and upgrade systems based on microprocessors and complex digital logic circuits. Microcomputer applications in the areas of control and automation and data acquisition, transfer, and analysis are also emphasized.

The program's mission is to produce graduates who have solid backgrounds in electronics and computer technology, the sciences, and the humanities; who possess critical thinking, problem solving, and effective communication skills; and who are ready to work, reliable, adaptable, and team oriented.

### Fox 11 Microcontroller



## Employment opportunities

Graduates of this program may find employment as computer engineers, electronics engineers, electronics engineer managers, automation and control engineers, project engineers, design engineers, manufacturing engineers, and networking engineers.

## Transfer students

Students with associate degrees or those with credits from other higher education institutions may choose to apply for transfer credit evaluation. The College of Basic and Applied Sciences evaluates general education and supporting courses. The student technical advisor in ETIS evaluates technical courses for possible transfer credit.

## The curriculum

Following are curriculum requirements for the Engineering Technology major with a concentration in Computer Engineering Technology. Students are required to complete a **minimum of 124 credit hours, 59 of which are in Engineering Technology.**

## General education

A total of **41 hours in the General Education program** is required. The program includes courses in Communication (9 hours), Humanities and/or Fine Arts (9 hours), Social/Behavior Sciences (6 hours), Natural Sciences (8 hours), Mathematics (3 hours), and History (6 hours). See the current MTSU undergraduate catalog for specifics.

## Supporting courses

CSCI 1170	Computer Science I
CSCI 2170	Computer Science II
MATH 1730	Algebra and Trigonometry (counts toward General Education requirements)
MATH 1910	Calculus I
MATH 1920	Calculus II
PHYS 2010	Non-Calculus-Based Physics I (counts toward General Education requirements)
PHYS 2020	Non-Calculus-Based Physics II (counts toward General Education requirements)
COMM 2200	Fundamentals of Communication (counts toward General Education requirements)
ENGL 3520	Professional Writing

## Technical sciences

ET 1840	Engineering Fundamentals
ET 3601	Electrical Circuit Analysis I
ET 3602	Electrical Circuit Analysis II
ET 3620	Digital Circuits Fundamentals
ET 3630	Electronics I
ET 4420	Industrial Safety
ET 4710	Industrial Seminar
ET 4970	Engineering Economy

## Technical specialties

ET 3640	Digital Circuits Design
ET 3650	Introduction to Microprocessors
ET 3670	Computer-Assisted Printed Circuit Board Design
ET 4600	Programmable Logic Controllers
ET 4610	Instrumentation and Controls
ET 4630	Local Area Networks
ET 4640	Industrial Electricity
ET 4660	Microprocessor Interfacing
ET 4670	Microprocessor Design

ET 4801	Senior Problem in Computer Engineering Technology
CSCI 3160	Introduction to Assembly Language
CSCI 3180	Introduction to Numerical Analysis
Technical Elective	

## Laboratories

There is a great emphasis on hands-on experience throughout this program. Most electronics courses divide time equally between lectures and labs with more emphasis on lab work at the senior level. There are five laboratories equipped with several state-of-the-art instruments.

- Basic Electricity and Electronics Lab
- Advanced Lab
- Microprocessor Lab
- Local Area Networks Lab
- Industrial Electricity Lab



There are also several other laboratories housed within the Engineering Technology and Industrial Studies Department that support Computer Engineering Technology and other programs.

## Accreditation

The Computer Engineering Technology concentration at MTSU is accredited by the Technology Accreditation Commission of the Accreditation Board of Engineering and Technology (ABET).

## For more information

### Dr. K. Salman

MTSU Box 19  
Murfreesboro, TN 37132  
(615) 898-2083  
Main Office: (615) 898-2776 [www.mtsu.edu/~isdept/](http://www.mtsu.edu/~isdept/)

### Admissions Office: (615) 898-2111

1-800-331-MTSU (in Tennessee)  
1-800-433-MTSU (out of state)  
[www.mtsu.edu/~admissn](http://www.mtsu.edu/~admissn)