

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 state-of-the-art instruments:

- Basic electricity and electronics lab
- Advanced electronics lab
- Microprocessor lab
- Local area networks lab
- Industrial electricity and control lab

There are other laboratories housed within the department to support the Computer Engineering Technology and other programs.



Accreditation

The Computer Engineering Technology concentration at MTSU is accredited by the Engineering Technology Accreditation Commission of ABET, <http://www.abet.org>.



For more information

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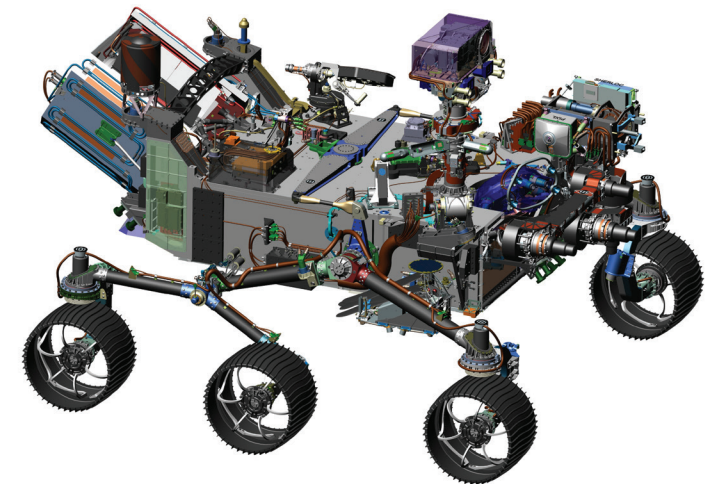
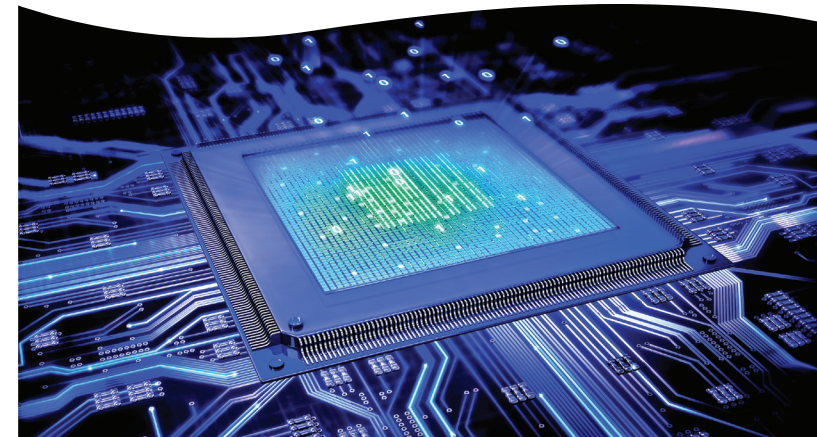
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MIDDLE TENNESSEE STATE UNIVERSITY

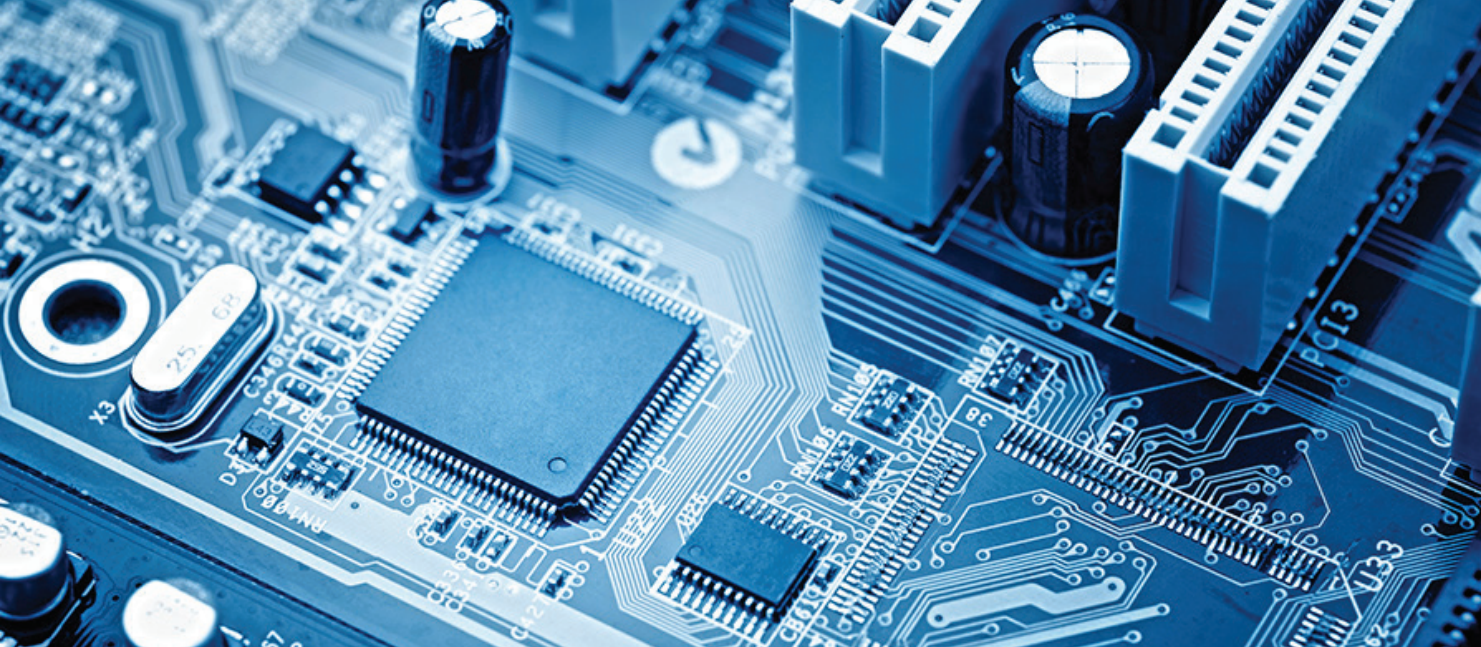
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**MIDDLE
TENNESSEE**
STATE UNIVERSITY

Computer Engineering Technology



*a concentration within the
Engineering Technology Department*



The department

The Engineering Technology (ET) Department prepares students for a wide range of **technical and applied engineering positions** in industry. 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 required for **success in their chosen fields**.

The program

The Computer Engineering Technology (CET) concentration is a **four-year program** leading 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
- embedded and digital systems
- computer hardware and software
- local and wide area networks
- internet of things (IOT)
- microprocessor and microcontroller applications
- automation and control
- data acquisition, transfer, and analysis
- instrumentation and measurements

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 of embedded systems and computers. These areas include manufacturing; medicine; aerospace; digital instrumentation, control, and measurement; sales; and installation and maintenance of computers and their networks.

The Computer Engineering Technology program offers students **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 in data acquisition, transfer, and analysis also are emphasized. The program's mission is to produce graduates with 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.**

Employment opportunities

Graduates 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 **ET student technical advisor** evaluates technical courses for possible transfer credit.

The curriculum

The following are curriculum requirements for the Computer Engineering Technology concentration. Students are required to complete a **minimum 124 credit hours, 53 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/Behavioral Sciences (6 hours), Natural Sciences (8 hours), Mathematics (3 hours), and History (6 hours). Please refer to the current *MTSU Undergraduate Catalog* for more details.

Engineering Technology Core (22 hours)

ENGR 1100	Engineering Fundamentals
ENGR 3915	Technical Project Management and Soft Skills
ENGR 3920	Engineering Safety
ENGR 3970	Engineering Economy
ET 3601	Electrical Circuit Analysis I
ET 3602	Electrical Circuit Analysis II
ET 4801	Computer Engineering Technology

Computer Engineering Technology Concentration (31 hours)

ET 3620	Digital Circuits Fundamentals
ET 3630	Electronics
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

Supporting courses

CSCI 1170	Computer Science I
CSCI 2170	Computer Science II
CSCI 3160	Introduction to Assembly Language
CSCI 3180	Introduction to Numerical Analysis
ENGL 3620	Professional Writing
MATH 1910	Calculus I
MATH 1920	Calculus II
PHYS 2020/2021	Non-Calculus-Based Physics II

Optional minor

CET students may choose to minor in Computer Science by taking an approved 3-credit-hour CSCI course at the upper division level.