

# BACHELOR OF SCIENCE IN COMPUTER ENGINEERING TECHNOLOGY



## WHAT IS COMPUTER ENGINEERING TECHNOLOGY?

Computer Engineering Technology (CET) applies engineering principles and technology to the practical design, development, testing, and maintenance of computer systems and networks. It bridges the gap between hardware and software, ensuring that computer systems and networks function efficiently and reliably. At the University of Houston (UH) Cullen College of Engineering's Technology Division, students study a broad range of topics, including computer architecture, embedded systems, digital electronics, network design, machine learning and artificial intelligence, and system analysis. Students in the CET program gain practical experience through lab work, projects, and internships, preparing them for roles in industries such as computing technology, networking and telecommunications, smart healthcare, robotics, and automated manufacturing.

## CAREERS IN COMPUTER ENGINEERING TECHNOLOGY

Computer Engineering Technology students at the Cullen College of Engineering's Technology Division will be prepared for engineering careers and graduate school. Typical position titles of recent graduates include computer systems engineer, computer test engineer, computer field specialist, interface designer, software specialist, computer networking specialist, data analyst, digital applications specialist, network administrator and systems analyst. Graduates also excel in training, consulting, and sales representation. The Cullen College of Engineering also has a dedicated Engineering Career Center which connects hundreds of students each year to internships and full-time positions.

## WHY EARN YOUR COMPUTER ENGINEERING TECHNOLOGY DEGREE AT THE UNIVERSITY OF HOUSTON?

### ACADEMICS

Undergraduate students in CET at the Cullen College of Engineering's Technology Division benefit from an ABET-accredited immersive, application-oriented curriculum that equips them with the knowledge and skills for successful careers in the exciting field of microcomputer applications and computer networking. The curriculum is thoughtfully designed to stay at the forefront of industry developments, ensuring students receive education that aligns with the latest advancements in the field. In the program's distinctive curriculum, students start by creating hands-on projects during the initial semester in the program, culminating in a two-semester senior design project focused on addressing real-world challenges. Computer engineering technology students have access to innovative computer facilities and state-of-the-art technology that is seamlessly integrated into the curriculum.

Students in the computer engineering technology program develop a solid foundation in mathematics, sciences, and electronics, which are essential for comprehending the intricate world of microcomputing. Students delve

deep into the study of digital circuits, embedded systems, and computer architecture and network systems. Faculty members closely collaborate with students, in their classrooms and laboratory sessions, by creating engaging exercises and projects that emphasize problem solving skills.

### RESEARCH

Research encompasses a diverse range of areas that span the cutting-edge intersection of computing technology, networking, and innovation. A diverse and experienced group of faculty engage in multidisciplinary array of research topics, including: (1) Embedded AI in IoT and communication networks, (2) Network security and privacy, (3) AI-assisted robotic systems, (4) Computational Health Informatics, (5) Bioimaging and biosensors, and (6) Smart grids, buildings and cities.

### SCHOLARSHIPS

Merit-based scholarships are awarded by the Cullen College of Engineering's Technology Division. Scholarships are also offered by the UH Office of Scholarships and Financial Aid. Additionally, the university's co-op program offers students the opportunity to receive career training while financing their education. [Learn more at https://dot.egr.uh.edu/advising/financial-aid/scholarships.](https://dot.egr.uh.edu/advising/financial-aid/scholarships)

### STUDENT ORGANIZATIONS

Students are encouraged to join academic and professional organizations to build leadership, communication, and networking skills. Members of student organizations receive career guidance from industry professionals and participate in activities that promote their field of study.

The Institute of Electrical and Electronics Engineers (IEEE) student chapter at the Cullen College of Engineering's Technology Division is a student organization that caters to students aspiring to enter the field of computer engineering technology and electrical power engineering technology. This student organization devotes its efforts to connecting members with industry professionals, faculty, and other undergraduate students.

### ET/CET FAST FACTS

**850/279** Total Undergraduate Students

**29/10** Total Faculty

**\$55,000 – \$140,000\*** Average Salary

**26:1** Student-to-Faculty Ratio Across the University

\* [https://www.bls.gov/oes/current/oes\\_nat.htm#15-0000](https://www.bls.gov/oes/current/oes_nat.htm#15-0000)

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## FOUR-YEAR ACADEMIC MAP 2023-2024

### YEAR 1

SEMESTER 1		SEMESTER 2		Total	
ELET 1400	Circuit Theory I & Lab	4	ELET 1401	Circuit Theory II & Lab	4
MATH 2413	Calculus I	4	MATH 2414	Calculus II	4
ENGL 1301	First Year Writing I	3	ENGL 1302	First Year Writing II	3
PHYS 1301/1101	College Physics I & Lab	4	PHYS 1302/1102	College Physics II & Lab	4
<b>Semester Hours 15</b>		<b>Semester Hours 15</b>		<b>30</b>	

### YEAR 2

SEMESTER 1		SEMESTER 2		Total	
ELET 2303/2103	Digital Systems & Lab	4	ELET 2305/2105	Semiconductor Dev & Circuits /Lab	4
ELET 3300 OR MATH 3321	Applied Math in ET or Engineering Mathematics	3	ELET 2300	Introduction to C++ Programming	3
HIST 1301	U. S. to 1877	3	HIST 1302	U.S. since 1877	3
GOVT 2306	US & Texas Constitution & Policies	3	GOVT 2305	Federal Government	3
CHEM 1305	Foundations of Chemistry I	3	CORE	Social/Behavioral Science	3
<b>Semester Hours 16</b>		<b>Semester Hours 16</b>		<b>32</b>	

### YEAR 3

SEMESTER 1		SEMESTER 2		Total	
ELET 3405	Microprocessor Architecture	4	ELET 3425	Embedded Systems	4
ELET 3301	Linear Systems Analysis	3	ELET 3402	Communication Circuits	4
ELET 3403	Sensor applications	4	MECT ELEC	See advisor	3
TECH 3366	Applied Numerical Methods	3	TLIM 3340	Org Leadership & Super	3
TLIM 3363	Technical Communication	3	Free Elective		3
<b>Semester Hours 17</b>		<b>Semester Hours 17</b>		<b>34</b>	

### YEAR 4

SEMESTER 1		SEMESTER 2		Total	
ELET 4308	Senior Project	3	ELET 4208	Senior Project Lab	2
ELET 4421	Computer Networks	4	MECT 4188	Ethics in Engineering	1
CORE	Creative Arts	3	CORE	Language, Philosophy & Culture*	3
ELET Elective		3	ELET Elective		3
ELET Elective		3	ELET Elective		3
<b>Semester Hours 16</b>		<b>Semester Hours 12</b>		<b>28</b>	
				<b>TOTAL SEMESTER HOURS 124</b>	

## FOR MORE INFORMATION

\*Students should meet with their academic advisor to formulate their own plan. Course offerings are subject to change.

UH Cullen College of Engineering Technology Division: <https://dot.egr.uh.edu/>  
Computer Engineering Technology Undergraduate Program: <https://dot.egr.uh.edu/programs/undergraduate/computer-engineering-technology> | Email: [asc@uh.edu](mailto:asc@uh.edu)

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