BACHELOR OF SCIENCE IN
COMPUTER ENGINEERING & ANALYTICS

WHAT IS COMPUTER ENGINEERING & ANALYTICS?

The BS in Computer Engineering & Analytics program combines computer engineering and data science. Students are taught a blend of topics from computer engineering including software and systems, control systems and robotics, and data analytics, which build upon a core engineering foundation. Graduates of this program will be well positioned in the demand for these topics in diverse industries including oil and gas energy, manufacturing, healthcare, financial services, transportation, logistics and retail.

CAREERS IN COMPUTER ENGINEERING & ANALYTICS

Career opportunities for computer engineers are excellent across all specialties. A 2022 salary survey produced by Payscale.com found that computer engineering graduates earned an average base salary of $88,896. Computers are used increasingly to control electronic and mechanical hardware, so these students are held in high regard by local and international companies. Our students work for a diverse group of companies including Hewlett Packard, Schlumberger and CenterPoint Energy, as well as for petrochemical, construction and telecommunication companies.

WHY EARN YOUR COMPUTER ENGINEERING & ANALYTICS DEGREE AT THE UNIVERSITY OF HOUSTON?

ACADEMICS

The computer engineering & analytics undergraduate degree program is a part of the Department of Electrical and Computer Engineering. Computer engineering & analytics undergraduates will take all of their major coursework at UH at Katy, located near the Grand Parkway & I-10, in Katy, Texas.

Faculty and staff in the electrical and computer engineering department at the UH Cullen College of Engineering take pride in their commitment to undergraduate education. Students are treated as individuals and have access to faculty advisors throughout their undergraduate career. Small classes are the rule, especially at the junior and senior level.
Learn more at http://www.ece.uh.edu/undergraduate/general-information

RESEARCH

The electrical and computer engineering department provides numerous opportunities to undergraduate students interested in doing research.

Many professors hire students to work in their labs, and the university offers stipends on a competitive basis for both summer and regular semester research projects. There is an amazing array of research going on inside of the department's labs, so students can get exposure to cutting-edge technologies and research tools.
Learn more at www.ece.uh.edu/research/undergraduate

STUDENT ORGANIZATIONS

Electrical and computer engineering students at UH like to get involved! We encourage you to join academic and professional organizations like the student chapter of the Institute of Electrical and Electronics Engineers (IEEE), Society of Women Engineers (SWE), National Society of Black Engineers (NSBE) and many others. Student organizations help you build leadership, communication and networking skills. Members of student organizations receive career guidance from engineering professionals and participate in activities that promote engineering. IEEE events include the Region 5 Robotics Competition and the annual IEEE Chili Cook-Off.
Learn more at www.ece.uh.edu/people/students

ABOUT UH AT KATY ★

The UH at Katy instructional site is an official part of the UH central campus. Completed in Fall 2019, the three-story, 80,000-square-foot-facility houses numerous programs from the UH Cullen College of Engineering, and is home to the prestigious Subsea Engineering graduate program— the first of its kind in the nation. Computer Engineering & Analytics, Systems Engineering and Construction Engineering are exclusively offered at UH at Katy.

UH at Katy is also one of the sites of the UH/HCC Engineering Academy. The UH/HCC Engineering Academy is a partnership with Houston Community College (HCC) where students are co-enrolled at both institutions. Students who are interested in computer engineering and analytics, systems or construction engineering and would like to complete all four years of their degree in the Greater Katy Area, may want to consider the cost-effective opportunities that the UH/HCC Engineering Academy has to offer. UH at Katy is located near the Grand Parkway & I-10, in Katy, Texas.
Learn more at https://www.egr.uh.edu/engineering-academies/hcc

ECE FAST FACTS ☑

720 Total Undergrad Students in Department

208 Total Faculty in Cullen College

$88,896 Average Salary

21:1 Student-to-Faculty Ratio Across the University

Cullen College of Engineering
UNIVERSITY OF **HOUSTON**

BACHELOR OF SCIENCE IN COMPUTER ENGINEERING & ANALYTICS — ILLUSTRATIVE FOUR-YEAR ACADEMIC PLAN

YEAR 1

SEMESTER 1			SEMESTER 2			Total
CHEM 1111	Fundamentals of Chemistry Lab	1	ENGI 1331	Computing for Engineers	3	
CHEM 1311	Fundamentals of Chemistry*	3	ENGL 1302	First Year Writing II*	3	
ENGI 1100	Introduction to Engineering	1	GOVT 2306	U.S. & TX Constitution/Politics*	3	
ENGL 1301	First Year Writing I*	3	MATH 2414	Calculus II*	4	
HIST 1301	The United States To 1877*	3	PHYS 2325	University Physics I*	3	
MATH 2413	Calculus I*	4	PHYS 2125	University Physics Laboratory I	1	
	Semester Hours	**15**		**Semester Hours**	**17**	**32**

YEAR 2

SEMESTER 1			SEMESTER 2			Total
ENGR 2406	Fundamentals of Digital Logic	4	ENGI 2304	Technical Communications*	3	
MATH 2415	Calculus III	4	MATH 3321	Engineering Math	3	
ECON 2302	Principles of Microeconomics*	3	ENGR 2405	Circuit Analysis	4	
PHYS 2326	University Physics II	3	GOVT 2305	US Government: Congress, President, & Courts*	3	
PHYS 2126	University Physics Laboratory II	1	CORE	Creative Arts*	3	
HIST 1302	The United States Since 1877*	3				
	Semester Hours	**18**		**Semester Hours**	**16**	**34**

YEAR 3

SEMESTER 1			SEMESTER 2			Total
CEA 3338	Microprocessor Systems	3	CEA 3311	Operating Systems for Engineers	3	
CEA 3201	Computer Programming for Engineering	2	CEA 3312	Fundamentals of Computer Architecture	3	
CEA 3302	Fundamentals of Software Engineering	3	CEA 3323	Data Structures & Algorithms	3	
CEA 3337	Digital Signals and Systems	3	CEA 3421	Introduction to Control Systems	4	
CORE	Language, Philosophy, & Culture*	3	INDE 2333	Engineering Statistics I	3	
	Semester Hours	**14**		**Semester Hours**	**16**	**30**

YEAR 4

SEMESTER 1			SEMESTER 2			Total
CEA 4321	Database Principles and Applications	3	CEA 4355	Engineering Data Analytics	3	
CEA 4339	Engineering Applications of Graph Theory	3	CEA 4341	Pattern Recognition and Machine Learning	3	
CEA 4335	Capstone Design I	3	CEA 4336	Capstone Design II	3	
CEA 4422	Communications & Networking	4	ECE 4442	Robotics & Automation	4	
CEA 4424	Embedded Computing & Internet of Things	4	ECE 4444	Intro to Cybersecurity	4	
	Semester Hours	**17**		**Semester Hours**	**17**	**34**
				TOTAL SEMESTER HOURS		**130**

*State of Texas Core Curriculum; All Major Courses will be taken out of the UH at Katy building;
Students should meet with their academic advisor to formulate their own plan.*

FOR MORE INFORMATION