BACHELOR OF SCIENCE IN
MECHANICAL ENGINEERING

WHAT IS MECHANICAL ENGINEERING?

Mechanical engineers are the jack-of-all-trades within the engineering profession. Just about everything you can think of involves a mechanical process, and anything with a mechanical process is the business of a mechanical engineer. These engineers work in nearly every industry you can imagine, addressing problems in such areas as energy conversion, aerospace, design of mechanical components and systems, man and machine environments, product reliability and safety, polymers, materials, and instrumentation and control of processes.

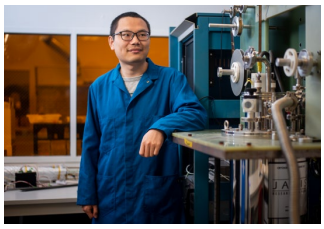
CAREERS IN MECHANICAL ENGINEERING

Career opportunities in mechanical engineering are excellent – especially in the city of Houston, the Energy Capital of the World. A 2022 salary survey produced by Payscale.com found that new mechanical engineering graduates earned an average base salary of $73,433. The American Society of Mechanical Engineers (ASME) reports median mid-career salaries for mechanical engineers as $145,000.

WHY EARN YOUR MECHANICAL ENGINEERING DEGREE AT THE UNIVERSITY OF HOUSTON?

ACADEMICS

The mechanical engineering department at the University of Houston Cullen College of Engineering is top-ranked, attracting the highest quality and hardest working students, faculty members and researchers. Undergraduate students in the mechanical engineering department are taught to connect the dots between classroom lessons and their real-world applications through project-based learning, hands-on laboratory research, Capstone design projects and seminars led by industry professionals. The department's curriculum provides students with the opportunity to learn how to think creatively and logically, and how to use new-found knowledge to address complex problems. Throughout the curriculum, but particularly in the three-course design sequence, students are challenged with creative design problems. To solve these problems, students use skills learned from classes in mechanics of materials, experimental methods, engineering analysis, controls, materials science, thermodynamics, fluid mechanics and heat transfer.
Learn more at www.me.uh.edu/undergraduate/overview



RESEARCH

The mechanical engineering department at the University of Houston Cullen College of Engineering places great emphasis on undergraduate research, encouraging all undergraduate students to get involved with faculty-led research projects or Capstone design projects before they graduate. Mechanical engineering faculty members are incredibly active and productive researchers, focusing on research projects that are motivated by the challenges of the 21st century and grounded in the fundamentals of the mechanical sciences. With so many exciting research opportunities in the mechanical engineering department – touching on areas including applied mechanics, controls and dynamical systems, biomedical engineering, design of mechanical systems, materials engineering, and thermal and fluid sciences – students are guaranteed to get hands-on research experience before they graduate!
Learn more at www.me.uh.edu/research/overview

SCHOLARSHIPS

Scholarships are offered through the mechanical engineering department for qualified, top-performing students. Merit-based scholarships are also awarded by the Cullen College of Engineering.

Additional scholarships are offered by the University of Houston Office of Scholarships and Financial Aid. Also, the university's co-op program allows students to receive career training while financing their education.
Learn more at www.me.uh.edu/undergraduate-program/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 engineering professionals and participate in activities that promote engineering.

The UH chapter of the American Society of Mechanical Engineers (ASME) is a highly active organization, promoting teamwork and collaboration throughout the duration of a student's academic career. Several events are held annually for students to gain knowledge and meet professional contacts and colleagues.
Learn more at www.me.uh.edu/undergraduate/student-organization

ME FAST FACTS

972 Total Undergrad Students in Department
208 Total Faculty in Cullen College
$73,433 Average Salary
21:1 Student-to-Faculty Ratio Across the University

Cullen College of Engineering
UNIVERSITY OF HOUSTON

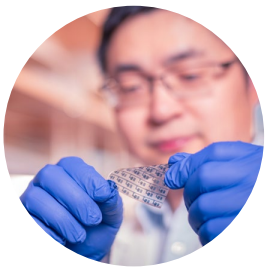
U.S. Well - Exhibit 2015
Liberty v. U.S. Well - IPR2025-00105

BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING ILLUSTRATIVE FOUR-YEAR ACADEMIC PLAN

YEAR 1

SEMESTER 1			SEMESTER 2			Total
CHEM 1311	Fundamentals of Chemistry*	3	CHEM 1312	Fundamentals of Chemistry 2*	3	
CHEM 1111	Fundamentals of Chemistry Lab	1	CHEM 1112	Fundamentals of Chemistry Lab	1	
ENGL 1301	First Year Writing I*	3	ENGI 1331	Computing for Engineers	3	
MATH 2413	Calculus I*	4	MATH 2414	Calculus II*	4	
GOVT 2306	U.S. & TX Constitution & Politics*	3	PHYS 2325	University Physics I	3	
ENGI 1100	Introduction to Engineering	1	ENGL 1302	First Year Writing II*	3	
	Semester Hours	**15**		**Semester Hours**	**17**	**32**

YEAR 2



SEMESTER 1			SEMESTER 2			
ENGR 2301	Mechanics I	3	ENGI 2304	Technical Communications*	3	
GOVT 2305	U.S. Government*	3	MATH 3321	Engineering Mathematics	3	
MATH 2415	Calculus III	4	MECE 2334	Thermodynamics I	3	
PHYS 2326	Physics II	3	MECE 3336	Mechanics II	3	
CORE	Language, Philosophy & Culture*	3	MECE 2361	Intro to Mechanical Design	3	
	Semester Hours	**16**		**Semester Hours**	**15**	**31**

YEAR 3

SEMESTER 1			SEMESTER 2			
MECE 3338	Dynamics & Control of Mech Systems	3	HIST 1302	The United States Since 1877*	3	
MATH 3363	Intro Partial Differential Equations	3	MECE 3245	Materials Science Lab	2	
MECE 3369	Solid Mechanics	3	MECE 3381	Intro to Finite Element Methods	3	
MECE 3345	Materials Science	3	MECE 3360	Experimental Methods	3	
CORE	Social & Behavioral Sciences*	3	MECE 3363	Intro to Fluid Mechanics	3	
HIST 1301	The United States to 1877	3	CORE	Creative Arts*	3	
	Semester Hours	**18**		**Semester Hours**	**17**	**35**

YEAR 4

SEMESTER 1			SEMESTER 2			
MECE 4364	Heat Transfer	3	MECE 4341	Mechanical Engr Capstone II	3	
MECE 4340	Mechanical Engr Capstone I	3	MECE 4371 or	Thermal-Fluids Lab or		
MECE 53XX	Mechanical Engr Elective	3	MECE 4372	Mechanics-Controls-Vibration Lab	3	
MECE 4331	Design of Machine Elements	3	MECE 53XX	Mechanical Engr Elective	3	
MECE 4343	Thermal Design	3	MECE 53XX	Mechanical Engr Elective	3	
			MECE 53XX	Mechanical Engr Elective	3	
	Semester Hours	**15**		**Semester Hours**	**15**	**30**
				TOTAL SEMESTER HOURS		**128**

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

FOR MORE INFORMATION

Get in touch with us and schedule a virtual or in person meeting: https://www.egr.uh.edu/academics/undergraduate-programs
UH Department of Mechanical Engineering: www.me.uh.edu
Undergraduate Program: www.me.uh.edu/undergraduate/overview | Email: cedwards4@uh.edu

UH Department of Mechanical Engineering | Engineering Building 1
4226 Martin Luther King Blvd., Suite N207 | Houston, Texas 77204-4006 | 713.743.4500

@uhengineering