

New for Fall 2018: Mechanical Engineering, B.S.

UHCL's Bachelor of Science in Mechanical Engineering will prepare competent engineering practitioners with an education grounded in scientific theories and hands-on laboratory experience. Upon completion of the program, students will have a broad and solid foundation of mechanical engineering knowledge. They'll be prepared to enter engineering practice and complete the experience requirements for becoming Professional Engineers in Mechanical Engineering. The program is pending SACSCOC approval (anticipated June 2018).

CAREERS IN MECHANICAL ENGINEERING

Mechanical engineering is the broadest of the engineering disciplines. Almost all industries require a mechanical process, and mechanical processes are the focus of mechanical engineering.

Mechanical engineers address a variety of problems in areas such as energy conversion, instrumentation and control of processes, product reliability and safety, and energy conversion. Real-life applications of this problem solving include designing piping and pumps, aircraft mechanical systems, heat exchangers and even nuclear fission. Program graduates will also be prepared to contribute to a changing future where Internet of Things (IoT), cybersecurity mechatronics and manufacturing become more prevalent. A 2017 survey by the National Association of Colleges and Employers found that new mechanical engineering graduates (bachelor's degree) earn an average starting salary of \$65,557.



NEW PROGRAM, NEW FACILITIES

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The Mechanical Engineering program will be located in UHCL's new STEM building. Developed as a hands-on program, seven laboratory spaces are dedicated to educating future mechanical engineers.

STEM Building lab spaces:

- Machine shop
- Computer lab
- Materials Science lab
- Additive Manufacturing lab
- Thermal - Fluids laboratory
- Mechanical Engineering Measurements and Instrumentation lab
- Capstone Design Studio

Available lab equipment includes:

- Modern traditional and CNC machines
- Laser cutting table
- Computer Aided Design and analysis software
- Research quality testing and preparation equipment
- Commercial quality, multimaterial, three-dimensional printer

Four Year Mechanical Engineering Academic Map

Semester 1			Semester 2		
WRIT 1301	English Composition I	3	WRIT 1302	English Composition I	3
HIST 1301	U.S. History I	3	MENG 1204	Engineering Graphics for Mech. Eng.	2
ENGR 1201	Introduction to Engineering	2	ENGR 1331	Computing for Engineers	3
CHEM 1311/1111	General Chemistry w/Lab	4	PHYS 2325/2125	University Physics I w/Lab	4
MATH 2413	Calculus I	4	MATH 2414	Calculus II	4
PSYC 1100	Learning Frameworks	1			
	<i>Semester Total</i>	17		<i>Semester Total</i>	16
Semester 3			Semester 4		
POLS 2305	Federal Government	3	COMM 1315	Public Speaking	3
PHYS 2326/2126	University Physics II w/Lab	4	MATH 2320	Ordinary Differential Equations	3
MATH 2315	Calculus III	3	ENGR 2305	Electrical Circuits I	3
MENG 2301	Statics	3	MENG 2302	Dynamics	3
MATH 2318	Linear Algebra	3	MENG 2334	Thermodynamics I	3
	<i>Semester Total</i>	16		<i>Semester Total</i>	15
Semester 5			Semester 6		
MENG 3210	Experimental & Statistical Methods w/Lab	2	CORE	Creative Arts	3
			CORE	Language Philosophy and Culture	3
MENG 3303	Solid Mechanics	3	MENG 3316	Heat Transfer	3
MENG 3310	Introduction to Fluid Mechanics	3	MENG 3314	Design Methodology	3
MENG 3324	Introduction to Materials Science	3	MENG 3344	Introduction to Manufacturing Processes	3
HIST 1302	U.S. History II	3			
CORE	Social & Behavioral Sciences	3			
	<i>Semester Total</i>	17		<i>Semester Total</i>	15
Semester 7			Semester 8		
MENG 4310	Dynamics & Control of Mechanical Systems	2	MENG 4341	Mechanical Engineering Capstone II	3
			MENG 43XX	Mechanical Engineering Elective	3
MENG 4340	Mechanical Engineering Capstone I	3	MENG 43XX	Mechanical Engineering Elective	3
			AMSE	Approved Math/Science Elective	3
MENG 4331	Design of Machine Elements	3	POLS 2306	Texas Government	3
MENG 4343	Thermal/Fluid System Design	3			
MENG 4171	Thermal/Fluids Lab	3			
WRIT 3315	Advanced Technical Writing	3			
	<i>Semester Total</i>	17		<i>Semester Total</i>	15

Total Hours for Mechanical Engineering: **127/128**

University of Houston  Clear Lake