Bachelor of Science in Mechanical Engineering

HCC (Houston City College) to UT Tyler

2026-2027 Catalog

Freshman Year

Fall Semester (HCC)

- CHEM 1311/1111 - General Chemistry II Lecture and Lab (4 Credit Hours)
- ENGR 1201 - Introduction to Engineering (3 Credit Hours)
- ENGL 1301 - Composition I (3 Credit Hours)
- HIST 1301 - US History I (3 Credit Hours)
- MATH 2413 - Calculus I (4 Credit Hours)

Semester Total: 16 Credit Hours

Spring Semester (HCC and UT Tyler)

- ENGR 1304 - Engineering Graphics (2 Credit Hours)
- MATH 2414 - Calculus II (4 Credit Hours)
- ACCT 2301 - Principles of Financial Accounting (3 Credit Hours)
- PHYS 2325/2125 - University Physics I Lecture & Lab (4 Credit Hours)
- ENGL 2311 - College Composition II (3 Credit Hours)
- ENGR 1000 - Thriving in Engineering (0 Credit Hours) – **co-enrollment at UT Tyler**

Semester Total: 17 Credit Hours

Sophomore Year

Fall Semester (HCC and UT Tyler)

- PHYS 2326/2126 - University Physics II (4 Credit Hours)
- MATH 2415 - Multivariate Calculus (4 Credit Hours)
- ENGR 2301 - Engineering Mechanics: Statics (3 Credit Hours)
- MENG 3319 - Materials Science and Manufacturing (3 Credit Hours) – **co-enrollment at UT Tyler**
- GOVT 2305 - Federal Government (3 Credit Hours)

Semester Total: 17 Credit Hours

Spring Semester (HCC and UT Tyler)

- MATH 2320 - Differential Equations (3 Credit Hours)
    - ECON 2301 - Principles of Macroeconomics (3 Credit Hours)
    - **OR**
    - ECON 2302 - Principles of Microeconomics (3 Credit Hours)
- ENGR 2302 - Engineering Mechanics: Dynamics (3 Credit Hours)
- ENGR 2305/2105 - Electrical Engineering Circuits I Lecture and Lab (4 Credit Hours)
- MATH 3203 - Matrix Methods in Science and Engineering (Linear Algebra and Matrix Theory) (2 Credit Hours) – **co-enrollment at UT Tyler**

Semester Total: 15 Credit Hours

Junior Year

Fall Semester (UT Tyler and HCC)

- MENG 4301 - Thermodynamics (3 Credit Hours)
- MENG 3310 - Fluid Mechanics (3 Credit Hours)
- MENG 3306 - Mechanics of Materials (4 Credit Hours)
- MENG 3210 - Experimental Measurements and Techniques (3 Credit Hours)
- SPCH 1315 - Introduction to Public Speaking (3 Credit Hours) – **co-enrollment at HCC**
- MATH 3351 - Probability and Statistics for Engineers and Scientists (3 Credit Hours)

Semester Total: 18 Credit Hours

Spring Semester (UT Tyler and HCC)

- MENG 3316 - Heat Transfer (3 Credit Hours)
- MENG 3309 - Mechanical Systems Design (3 Credit Hours)
- MENG 3211 - Thermal-Fluids Laboratory (3 Credit Hours)
- MENG 4311 - Introduction to Mechatronics (3 Credit Hours)
- PHIL 2306 – Introduction to Ethics (3 Credit Hours) – **co-enrollment at HCC**
- Technical Elective (3 Credit Hours)

Semester Total: 15 Credit Hours

Senior Year

Fall Semester (UT Tyler and HCC)

- MENG 4215 - Senior Capstone Design I (2 Credit Hours)

- HIST 1302 - United States History II (3 Credit Hours) – **co-enrollment at HCC**
- MENG 4312 - System Dynamics and Control (3 Credit Hours)
- Technical Elective (3 Credit Hours)
- Technical Elective (3 Credit Hours)
- Creative Arts Core Course (3 Credit Hours)

Semester Total: 17 Credit Hours

Spring Semester (UT Tyler and HCC)

- MENG 4216 - Senior Capstone Design II (3 Credit Hours)
- POLS 2306 - Introductory Texas Politics (3 Credit Hours) – **co-enrollment at HCC**
- MENG 4326 - Finite Element Analysis (3 Credit Hours)
- Technical Elective (3 Credit Hours)
- Technical Elective (3 Credit Hours)

Semester Total: 14 Credit Hours

Total Credit Hours: 131

Notes:

- Additional lower-division (CORE) courses can be completed either at HCC or through online enrollment with UT Tyler's main campus.
- The above plan is subject to change based on updates to course offerings at both UT Tyler and HCC
- For more information or to schedule an appointment with an advisor, please email a copy of your unofficial transcript to: HEC@UTTYLER.EDU.