ENGINEERING - ASSOCIATE OF SCIENCE

Students can earn an Associate of Science in Chemical Engineering or an Associate of Science in Engineering, which prepares them to transfer to a university. Students will build a foundational knowledge of engineering principles and explore concepts through labs, hands-on class activities, and extra-curricular opportunities. Students will gain marketable skills in empirical and quantitative analysis, critical thinking, communication, and teamwork while completing their coursework and laboratory requirements.

Students completing an Associate of Science (AS) degree at COM will meet the following requirements:

1. Complete a minimum of 60 semester credit hours that may be comprised of courses from the Core Curriculum, institutional requirements, and Fields of Study.
2. Maintain at least a 2.0 grade point average (GPA). Only credit-bearing College of the Mainland courses will be used to calculate a GPA.
3. Complete last 15 credit hours toward this degree at COM, with the exception of reverse transfer.
4. Satisfy TSI liability.

Full-Time Student Schedule

Course	Title	Semester Credit Hours
Semester #1		
MATH 2413	Calculus I [3]	4
CHEM 1411	General Chemistry I [3]	4
ENGR 1201	Introduction to Engineering [3]	2
ENGL 1301	Composition I [3]	3
PSYC 1300 or EDUC 1300	Learning Framework [3] or Learning Framework	3
	Semester Credit Hours	**16**
Semester #2		
PHYS 2425	University Physics I [3]	4
ENGR 1304	Engineering Graphics I [3]	3
MATH 2414	Calculus II [3]	4
ENGL 1302	Composition II [3]	3
PHED 1164	Introduction to Physical Fitness and Wellness [3]	1
	Semester Credit Hours	**15**
Semester #3		
ENGR 2301	Engineering Mechanics - Statics [3]	3
ENGR 2304	Programming for Engineers [3]	3
PHYS 2426	University Physics II [3]	4
MATH 2415	Calculus III [3]	4
	Semester Credit Hours	**14**
Semester #4		
ENGR 2302	Engineering Mechanics - Dynamics [3]	3
ENGR 2305 or GOVT 2305	Electrical Circuits I [2, 3] or Federal Government (Federal Constitution & Topics)	3
MATH 2320	Differential Equations [3]	3
MATH 2318 or HIST 1301	Linear Algebra [1, 3] or U S History I	3
SPCH 1315 or SPCH 1318	Public Speaking [3] or Interpersonal Communication	3
	Semester Credit Hours	**15**
	Total Semester Credit Hours	**60**

1. Students should check with an advisor to ensure transferability of Linear Algebra to their receiving institution and program. For cases in which transferability of Linear Algebra cannot be established, students should take US History I.
2. Students should check with an advisor to ensure transferability of the coursework at the receiving institution and program. In general, students pursuing transfer to a Mechanical Engineering program should enroll in Electrical Circuits I, while students pursuing transfer to a Civil Engineering program should enroll in Federal Government.
3. Course(s) listed in the Texas Common Course Numbering System (https://tccns.org/institution/id:14/yid:19/)

Transfer Information - Engineering

Important Notes: The schools represented here are only a small sample of transfer options. Information is subject to change, and this suggested pathway is a guide, not a contract. Students should use this in consultation with a COM advisor, COM catalog, Texas Pathways state-wide transfer guidelines, and advisor at the transfer institution.

University of Houston - Clear Lake (BS Mechanical Engineering)

Course	Title	Semester Credit Hours
Semester #1		
MATH 2413	Calculus I	4
CHEM 1411	General Chemistry I	4
ENGR 1201	Introduction to Engineering	2
ENGL 1301	Composition I	3
PSYC 1300	Learning Framework	3
	Semester Credit Hours	**16**
Semester #2		
PHYS 2425	University Physics I	4
ENGR 1304	Engineering Graphics I	3
MATH 2414	Calculus II	4
ENGL 1302	Composition II	3
PHED 1164	Introduction to Physical Fitness and Wellness	1
	Semester Credit Hours	**15**

Semester #3		
ENGR 2301	Engineering Mechanics - Statics	3
ENGR 2304	Programming for Engineers	3
PHYS 2426	University Physics II	4
MATH 2415	Calculus III	4
	Semester Credit Hours	**14**
Semester #4		
ENGR 2302	Engineering Mechanics - Dynamics	3
ENGR 2305	Electrical Circuits I	3
MATH 2320	Differential Equations	3
MATH 2318	Linear Algebra	3
SPCH 1315	Public Speaking	3
	Semester Credit Hours	**15**
	Total Semester Credit Hours	**60**

University of Houston (BSME Mechanical Engineering)

Course	Title	Semester Credit Hours
Semester #1		
MATH 2413	Calculus I	4
CHEM 1411	General Chemistry I	4
ENGR 1201	Introduction to Engineering	2
ENGL 1301	Composition I	3
PSYC 1300	Learning Framework	3
	Semester Credit Hours	**16**
Semester #2		
PHYS 2425	University Physics I	4
ENGR 1304	Engineering Graphics I	3
MATH 2414	Calculus II	4
ENGL 1302	Composition II	3
PHED 1164	Introduction to Physical Fitness and Wellness	1
	Semester Credit Hours	**15**
Semester #3		
ENGR 2301	Engineering Mechanics - Statics	3
ENGR 2304	Programming for Engineers	3
PHYS 2426	University Physics II	4
MATH 2415	Calculus III	4
	Semester Credit Hours	**14**
Semester #4		
ENGR 2302	Engineering Mechanics - Dynamics	3
ENGR 2305	Electrical Circuits I	3
MATH 2320	Differential Equations	3
MATH 2318	Linear Algebra	3
SPCH 1315	Public Speaking	3
	Semester Credit Hours	**15**
	Total Semester Credit Hours	**60**

Texas State University - San Marcos (BS Mechanical Engineering)

Course	Title	Semester Credit Hours
Semester #1		
MATH 2413	Calculus I	4
CHEM 1411	General Chemistry I	4
ENGR 1201	Introduction to Engineering	2
ENGL 1301	Composition I	3
PSYC 1300	Learning Framework	3
	Semester Credit Hours	**16**
Semester #2		
PHYS 2425	University Physics I	4
ENGR 1304	Engineering Graphics I	3
MATH 2414	Calculus II	4
ENGL 1302	Composition II	3
PHED 1164	Introduction to Physical Fitness and Wellness	1
	Semester Credit Hours	**15**
Semester #3		
ENGR 2301	Engineering Mechanics - Statics	3
ENGR 2304	Programming for Engineers	3
PHYS 2426	University Physics II	4
MATH 2415	Calculus III	4
	Semester Credit Hours	**14**
Semester #4		
ENGR 2302	Engineering Mechanics - Dynamics	3
ENGR 2305	Electrical Circuits I	3
MATH 2320	Differential Equations	3
MATH 2318	Linear Algebra	3
SPCH 1315	Public Speaking	3
	Semester Credit Hours	**15**
	Total Semester Credit Hours	**60**

Texas A&M University (BS Mechanical Engineering)

Course	Title	Semester Credit Hours
Semester #1		
MATH 2413	Calculus I	4
CHEM 1411	General Chemistry I	4
ENGR 1201	Introduction to Engineering	2
ENGL 1301	Composition I	3
PSYC 1300	Learning Framework	3
	Semester Credit Hours	**16**
Semester #2		
PHYS 2425	University Physics I	4
ENGR 1304	Engineering Graphics I	3
MATH 2414	Calculus II	4
ENGL 1302	Composition II	3

PHED 1164	Introduction to Physical Fitness and Wellness	1
	Semester Credit Hours	**15**
Semester #3		
ENGR 2301	Engineering Mechanics - Statics	3
ENGR 2304	Programming for Engineers	3
PHYS 2426	University Physics II	4
MATH 2415	Calculus III	4
	Semester Credit Hours	**14**
Semester #4		
ENGR 2302	Engineering Mechanics - Dynamics	3
ENGR 2305	Electrical Circuits I	3
MATH 2320	Differential Equations	3
MATH 2318	Linear Algebra	3
SPCH 1315	Public Speaking	3
	Semester Credit Hours	**15**
	Total Semester Credit Hours	**60**

University of Texas - Austin (BS Mechanical Engineering)

Course	Title	Semester Credit Hours
Semester #1		
MATH 2413	Calculus I	4
CHEM 1411	General Chemistry I	4
ENGR 1201	Introduction to Engineering	2
ENGL 1301	Composition I	3
PSYC 1300	Learning Framework	3
	Semester Credit Hours	**16**
Semester #2		
PHYS 2425	University Physics I	4
ENGR 1304	Engineering Graphics I	3
MATH 2414	Calculus II	4
ENGL 1302	Composition II	3
PHED 1164	Introduction to Physical Fitness and Wellness	1
	Semester Credit Hours	**15**
Semester #3		
ENGR 2301	Engineering Mechanics - Statics	3
ENGR 2304	Programming for Engineers	3
PHYS 2425	University Physics I	4
MATH 2415	Calculus III	4
	Semester Credit Hours	**14**
Semester #4		
ENGR 2302	Engineering Mechanics - Dynamics	3
ENGR 2305	Electrical Circuits I	3
MATH 2320	Differential Equations	3
MATH 2318	Linear Algebra	3
SPCH 1315	Public Speaking	3
	Semester Credit Hours	**15**
	Total Semester Credit Hours	**60**