Engineering

The Engineering program prepares students to transfer to a four-year institution to pursue a Bachelor of Science degree in Engineering. The first four semesters of classes are similar in the various engineering fields. An articulation agreement with Texas A&M University facilitates a seamless transition of students into one of the following College of Agriculture and Life Sciences Bachelor of Science degree programs: Biological and Agricultural Engineering or Agricultural Systems Management. Students must work closely with a success coach or advisor to select the best options for successfully transitioning to their selected four-year institution.

Program Learning Outcomes (PLO)

After completing the AS in Engineering degree, students will be able to:

PLO 1: Demonstrate the ability to apply core engineering principles, including problem-solving, design, and analysis, to address real-world technical challenges, while utilizing appropriate tools, techniques, and technologies.

PLO 2: Critically evaluate evidence and make informed decisions using the scientific method.

PLO 3: Effectively use mathematical theories, formulas, and methods to solve problems and perform calculations.

PLO 4: Apply fundamental principles of physics, including mechanics, electromagnetism, thermodynamics, and waves, to analyze and solve real-world physical phenomena and engineering problems.

Courses Measuring the Achievement of Program Learning Outcomes

Course	PLO 1	PLO 2	PLO 3	PLO 4
ENGR 2301 and ENGR 2302	X			
CHEM 1409		X		
MATH 2413			X	
PHYS 2425 and PHYS 2426				X

ENGINEERING RECOMMENDED ACADEMIC PLAN

1ST YEAR, 1ST SEMESTER			Credit Hours	✓
Term 1				
ENGL	1301	Composition I	3	☐
Term 2				
HIST	1301	U.S. History I	3	☐
Full Term				
CHEM	1409	General Chemistry for Engineering Majors	4	☐
MATH	2413	Calculus I	4	☐
✹ ***Earned:***			**14**	

1ST YEAR, 2ND SEMESTER				
Term 1				
ENGL	2311	Technical & Business Writing	3	☐
Term 2				
HIST	1302	U.S. History II	3	☐
Full Term				
MATH	2414	Calculus II	4	☐
PHYS	2425	University Physics II	4	☐
✹ ***Earned:***			**14**	

2ND YEAR, 1ST SEMESTER				
Term 1				
GOVT	2305	Federal Government	3	☐
Term 2				
ENGL	2322	British Literature I	3	☐
Full Term				
ENGR	2301	Engineering Mechanics I: Statistics	3	☐
MATH	2415	Calculus III	4	☐
PHYS	2426	University Physics II	4	☐
✹ ***Earned:***			**17**	
☞ ***Apply for Graduation***				

2ND YEAR, 2ND SEMESTER				
Term 1				
GOVT	2306	Texas Government	3	☐
PSYC	2301	General Psychology	3	☐
Term 2				
MUSI	1306	Music Appreciation	3	☐
Full Term				
ENGR	2302	Engineering Mechanics II: Dynamics	3	☐
MATH	2320	Differential Equations	3	☐
✹ ***Earned:***		***Associate of Science in Engineering***	**Total Hours**	**60**