The Associate of Science degree in Engineering is a broad plan that meets the needs of the first two years of a four-or five-year engineering degree program. While this plan identifies courses that will apply toward most undergraduate engineering programs, it is important that the student works with a TJC Academic Advisor each semester as well as visit with their transfer University early to make sure that they are on track and taking courses toward their specific specialty of engineering.

Some institutions of higher education in the State of Texas participate in voluntary transfer compacts for Engineering to foster enhanced transfer processes for students pursuing bachelor’s degrees in Civil, Electrical, Industrial, or Mechanical engineering. Students should refer to the following link to access the latest list of participating schools for the voluntary compacts: <http://www.thecb.state.tx.us/index.cfm?objectid=C02EE263-D0D4-CB89-63334BECB85CB617>

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| --- | --- | --- | --- | --- | --- | --- |
| **SEMESTER I** |  |  |  | **SEMESTER II** |  |  |
| ENGL | 1301 | Composition I  |  |  | ENGL | 1302 | Composition II |  |
| MATH | 2413 | Calculus I |  |  | MATH | 2414 | Calculus II |  |
| CHEM | 1411 | General Chemistry I |  |  | PHYS | 2425 | University Physics I **(Spring)** |  |
| ENGR | 1201 | Introduction to Engineering |  |  | HIST  | 1301 | United States History I |  |
| ENGR | 1304 | Engineering Graphics |  |  |  | Visual/Performing Arts Course |  |
|  |  | **Total Credit Hours = 16** |  |  |  |  | **Total Credit Hours = 17** |  |
|  |  |  |  |  |  |  |  |  |
| **SEMESTER III** |  |  | **SEMESTER IV** |  |
| ENGR | 2304 | Programming for Engineers |  |  | ENGR |  2305 | Circuits I for Electrical Engineering (w/2105 lab) |  |
| ECON | 2301 | Principles of Macroeconomics ***OR*** |  |  | MATH |  2320 | Differential Equations |  |
|  *ECON* | *2302* | *Principles of Microeconomics* |  |  | ­­­\_\_\_\_\_ |  \_\_\_\_ | Engineering Elective\* |
| ENGR | 2301 | Engineering Mechanics I – Statics **(Fall)** |  | GOVT |  2306 | Texas Government |  |
| **OR** for Chemical Engineers: |  | ENGL |  \_\_\_\_ | World or European Literature |  |
| CHEM | 2425 | Organic Chemistry I |  |  |  |  |  |
| MATH | 2415 | Calculus III |  |  |  |  |  |  |
| PHYS | 2426 | University Physics II **(Fall)** |  |  |  |  | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |  |
|  |  | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |  |  |  |  | **Total Credit Hours = 16** |  |
|  |  | **Total Credit Hours = 17** |  |  |  |  |  |  |
|  |  |  |  |  |  |  | **Total Semester Hours = 66** |  |

**Notes:**

* The curriculum for an AS in Engineering does not require core curriculum completion. Remaining coursework to satisfy core curriculum completion may be taken at the senior college or university.
* Texas Common Course Numbers were used for all TCCN numbered courses.
* Engineering Elective:
	+ Students interested in pursuing mechanical or civil engineering should take ENGR 2302 “Engineering Mechanics – Dynamics” as the engineering elective. This is a course offered only in the Spring semester.
	+ Students interested in pursuing electrical engineering should take COSC 1420 “C” Programming I or equivalent as the engineering elective.
	+ Students interested in pursuing industrial engineering should take ENGR 2308 “Engineering Economics” as the engineering elective.
	+ Students interested in pursuing chemical engineering should take CHEM 2426 “Organic Chemistry II” as the engineering elective.
* Visual/Performing Arts Course: Should be selected from MUSI 1306, DRAM 1310, or ARTS 1301.

**For more information, contact:** Gene Branum, Professor/Department Chair, Engineering/Physical Sciences, G-207 / gbra@tjc.edu / 903-510-2232.