STEM

GUIDED PATHWAY: PRE-MECHANICAL ENGINEERING

For more information, visit www.dcccd.edu/Engineering and your academic advisor at your college.

The Pre-Mechanical Engineering pathway prepares you to enter a bachelor's degree program in Mechanical Engineering. An Associate of Science (AS) degree in this pathway prepares you to transfer to a university to earn a bachelor's degree [ii] that opens the door to a career as a Mechanical Engineer, Automotive Engineer, and Robotic Engineer.

This is an example course sequence for students interested in pursuing Pre-Mechanical Engineering. It does not represent a contract, nor does it guarantee course availability. Following this pathway will help you earn an AS degree [iii], which will increase your chances of transfer to bachelor's-level programs. Students who transfer to one of the participating universities will **not** be core complete if he/she complete this degree. This degree **does not** include all core course requirements. Courses that complete the Degree (D) are noted below. For official degree requirements, click here.

Visit www.dcccd.edu/TransferSerivces to view the Top 15 colleges and universities to which students at the colleges of DCCCD transfer. Visit with your academic advisor to choose courses that will help you to transfer to a specific university.

Offered at BHC, CVC & MVC

COLLEGE READINESS REQUIREMENTS

Enrolling in one or more courses may be necessary if assessment activities and previous academic experiences indicate a need for additional knowledge and skills:

READING & WRITING PLACEMENT	MATH PLACEMENT	ENGLISH LANGUAGE PROFICIENCY
TSI READING MET: __YES __NO TSI WRITING MET: __YES __NO	TSI MATH MET: __YES __NO	ENGLISH PROFICIENCY: __YES __NO
IF TSI OR ENGLISH LANGUAGE PROFICIENCY NOT MET, INSERT COURSE(S) NEEDED		
☐ DREA / DWRI / DIRW *(CIRCLE ONE)* _____ ☐ OTHER: _____	☐ DMAT_____ ☐ OTHER: _____	☐ ESOL _____ ☐ OTHER: _____

Exemptions/waivers may exist. Speak with an academic advisor regarding placement in college readiness courses and your ability to enroll in core academic coursework.

PROGRAM SPECIFIC REQUIREMENTS [iv]

- ☐ MATH 1314 [iv]
- ☐ MATH 1316 [iv]
- ☐ MATH 2412 [iv]

[iv] ***These are pre-reqs to MATH 2413.***

SEMESTER-BY-SEMESTER MAP FOR FULL-TIME STUDENTS [v]

ALL MAPS CAN BE MODIFIED TO FIT THE NEEDS OF PART-TIME STUDENTS

D	SEMESTER 1	ACTION ITEMS
♦	**ENGL 1301** – Composition I [vi] *(core course)*	☐ Meet with your advisor to confirm your academic and career goals by the end of the semester. ☐ At the end of the semester, begin researching colleges and universities where you would want to major in Mechanical Engineering [ii]. ☐ Meet with a career advisor/coach to research your career options with a Mechanical Engineering degree.
♦	**HIST 1301** – United States History I *(core course)*	
♦	**MATH 2413** – Calculus I [iv] [vi] *(core course)*	
♦	**SPCH 1311** – Introduction to Speech Communication ***OR*** **SPCH 1315** – Public Speaking *(all core courses)* ***OR*** **SPCH 1321** – Business and Professional Communication	
	TOTAL SEMESTER CREDIT HOURS: 13	

D	SEMESTER 2	ACTION ITEMS
♦	**ENGL 1302** – Composition II *(core course)*	☐ Meet with your advisor to request an official program of study audit, confirm or update your academic/career pathway and program of study. ☐ Ask about transfer advising to discuss options to pursue the bachelor's degree.
♦	**HIST 1302** – United States History II [vii] *(core course)*	
♦	**PHYS 2425** – University Physics I *(core course)*	
♦	**MATH 2414** – Calculus II	
	TOTAL SEMESTER CREDIT HOURS: 14	

D	SEMESTER 3	ACTION ITEMS
♦	**X3XX** Language, Philosophy and Culture Core Elective [vii] *(core course)*	☐ Begin applying to your top choice universities
♦	**GOVT 2305** – Federal Government *(core course)*	
	TOTAL SEMESTER CREDIT HOURS: 6	

D	SEMESTER 4	ACTION ITEMS
♦	**GOVT 2306** – Texas Government *(core course)*	☐ Begin applying for Financial Aid and Scholarships ○ You can start the FAFSA in October for the next academic year. *(i.e., in October 2018, you can complete the FAFSA if you plan to register for classes at a university Fall 2019)* ☐ Check with your advisor for important deadlines and dates.
♦	**ECON 2301** – Principles of Macroeconomics *(core course)*	
♦	**PHYS 2426** – University Physics II *(core course)*	
♦	**ENGR 2301** – Engineering Mechanics - Statics	
	TOTAL SEMESTER CREDIT HOURS: 13	

D	SEMESTER 5	ACTION ITEMS
♦	**ENGR 2302** – Engineering Mechanics - Dynamics	☐ After reviewing your degree plan and program of study, apply for Graduation. ○ Meet with your advisor to apply for the Associate of Science degree in Pre-Mechanical Engineering. ○ Sign up for commencement. ☐ Request final transcripts to be sent to the college or university to where you will transfer. ☐ Join the Alumni Network!
♦	**ENGR 2305** – Electrical Circuits I	
♦	**ENGR 2105** – Electrical Circuits I Laboratory	
♦	**MATH 2415** – Calculus III	
♦	***Choose One:*** **ARTS 1301** – Art Appreciation [vii] *(core course)* **DANC 2303** – Dance Appreciation [vii] *(core course)* **DRAM 1310** – Introduction to Theater [vii] *(core course)* **HUMA 1315** – Fine Arts Appreciation [vii] *(core course)* **MUSI 1306** – Music Appreciation [vii] *(core course)*	
	TOTAL SEMESTER CREDIT HOURS: 14	

AS DEGREE MINIMUM: 60 SEMESTER CREDIT HOURS | PATHWAY TOTAL: 60 SEMESTER CREDIT HOURS

[i] Degree plans may change in later catalogs. You may use this pathway if you entered one of the seven colleges on or before this date.
[ii] You may need to complete additional courses, beyond those listed in this pathway, to be accepted into the Pre-Mechanical Engineering program at a Participating University. *Speak with your academic advisor for more information and a list of additional courses.*
[iii] Students must earn at least 25% of the credit hours (15 hours) required for graduation through instruction by one of the three DCCCD colleges awarding the degree.
[iv] To register for MATH 2413, you must have completed the prerequisite math courses as follows: MATH 1314, MATH 1316, MATH 2412
[v] You must earn a grade of "C" or better in English 1301 and the selected college-level mathematics course and receive a GPA of at least 2.00 on all college-level course work.
[vi] This is not an official degree plan. For official degree requirements, click here.
[vii] There are several options to fulfill this requirement. See your academic advisor for a specific list.

THIS PATHWAY WAS LAST UPDATED APRIL 15, 2019