

# GUIDED PATHWAY: ADVANCED MANUFACTURING/MECHATRONICS TECHNOLOGY A.A.S.

MANUFACTURING and INDUSTRIAL TECHNOLOGY CAREER PATH



For more information, visit the [Dallas College Mechatronics webpage](http://www.dcccd.edu/Mechatronics) [www.dcccd.edu/Mechatronics] and your academic advisor at the Eastfield Campus.

This is an example course sequence for students interested in pursuing Advanced Manufacturing/Mechatronics Technology. It does not represent a contract, nor does it guarantee course availability. Following this pathway will help you earn an Associate of Applied Science (A.A.S.) degree in Advanced Manufacturing/Mechatronics Technology. Students must earn at least 25% of the credit hours (15 hours) required for graduation through instruction by Dallas College. See catalog for [official degree requirements](#).

Advanced manufacturing/mechatronics technology merges electronics, mechanics, fluid power, PLC and computer controls with sensors, transducers and actuators to manufacture a product or perform a task with minimal human intervention. This frees people from the routine tasks and allows them to focus on solving problems, fixing equipment breakdowns or changing processes for better operation. A person with these diverse skill sets has a wider range of employment opportunities and is prepared to adapt to changes in industry. The technician with training in advanced manufacturing/mechatronics will be ready to take advantage of the new developments in industry and realize their potential to grow with changes in the global economy. Courses that complete the degree also complete the [Advanced Manufacturing/Mechatronics Technology Certificate](#) (AC) and are noted below. The Advanced Manufacturing/Mechatronics Technology Certificate is offered at the Eastfield and Mountain View Campuses.

Visit the [NTCCC Transfer Consortium](#) to view guided pathways created for students who complete an A.A.S. degree and the options for transfer to complete a Bachelor of Applied Arts and Science. Speak with an academic advisor at your campus to choose courses that will help you to transfer to a specific university.

Catalog Year	2020-2021	You may use this pathway if you entered one of the seven colleges on or before this date.
Degree Type	Associate of Applied Science	
GPA Requirement	Student must earn a GPA of 2.0 or higher	
<a href="#">TSI</a>	Must be Complete	

## SEMESTER-BY-SEMESTER MAP FOR FULL-TIME STUDENTS

All plans can be modified to fit the needs of part-time students. This is not an official degree plan. See catalog for [official degree requirements](#). Student must earn a GPA of 2.0 or higher.

**AAS DEGREE MINIMUM: 60 SEMESTER CREDIT HOURS**

### MECHATRONIC TECHNICIAN APPRENTICESHIP

**NOTE:** Use of the Continuing Education [Mechatronic Technician Apprenticeship as a transition](#) bridge to the Associate of Applied Science Degree in Mechatronics is possible. Upon successful completion of the criteria listed in the catalog, students will be awarded a specified **20** credit hours of equivalent-articulated credit for courses in the Associate of Applied Science Degree in Mechatronics.

### SEMESTER 1

**Total Hours: 15**

[CETT 1403](#) – DC Circuits

[ELMT 1405](#) – Basic Fluid Power *Capstone course for the certificate. (Course also applies to AC)*

[ENGL 1301](#) - Composition I *This is a Core course. You must earn a grade of "C" or better.*

**CHOOSE ONE:** [MATH 1314](#) – College Algebra *This is a Core course. You must earn a grade of "C" or better.* **OR**

[MATH 1332](#) – Contemporary Mathematics *This is a Core course. You must earn a grade of "C" or better.*

**CHOOSE ONE:** [EECT 1104](#) – Electronic Soldering **OR**

**EECT 1191** – Special Topics in Electrical, Electronic and Communications Engineering Technology/Technician

**SEMESTER 1 ACTION ITEMS**

1. Meet with your advisor to confirm academic and career goals before the end of the semester.
2. Meet with a career advisor or coach to research your career options and opportunities for job shadowing.

**SEMESTER 2**

**Total Hours: 15**

**MFGT 1404** – Automated Manufacturing (*Course also applies to AC*)

**CETT 1405** – AC Circuits

**CETT 1429** – Solid State Devices

**CHOOSE ONE:** **SPCH 1311** – Introduction to Speech Communication *This is a Core course.* **OR**

**SPCH 1315** – Public Speaking *This is a Core course.*

**SEMESTER 2 ACTION ITEMS**

1. Meet with your advisor to request an official program of study audit and confirm or update your academic and career path and program of study.
2. If you are interested in completing a Cooperative Education course (CETT 2480 or 2481), meet with a faculty or career advisor regarding placement.

**SEMESTER 3**

**Total Hours: 15**

**MFGT 1406** – Mechanical Principles in Automated Manufacturing (*Course also applies to AC*)

**CETT 1425** – Digital Fundamentals

**ELPT 2419** – Programmable Logic Controllers I (*Course also applies to AC*)

**HUMANITIES/FINE ARTS ELECTIVE\*** *This is a Core course.*

\* There are several options to fulfill this requirement. See your academic advisor for a specific list.

**SEMESTER 3 ACTION ITEMS**

1. Meet with your advisor to apply for the Advanced Manufacturing/Mechatronics Technology Certificate Completion, available at Eastfield College and Mountain View College.
2. Meet with a career advisor or coach for assistance in preparing for job search.

**SEMESTER 4**

**Total Hours: 15**

**MFGT 2459** – Industrial Automation II *Alternate capstone course for the certificate.*

**TECHNICAL ELECTIVE\*** (one course)

**SOCIAL/BEHAVIORAL SCIENCE ELECTIVE\*\*** *This is a Core course.*

**CHOOSE ONE:** **CETT 1441** – Solid State Circuits *capstone course for the degree* **OR**

**CETT 2480** – Cooperative Education-Computer Engineering Technology/Technician *capstone course for the degree*

\*Technical elective must be selected from the following: CETT 1407, CETT 1449, CETT 2480, CETT 2481, CPMT 1403, EECT 1491, HART 1407, MCHN 1454, WLDG 1471. Only one cooperative education course can be taken in any one semester

\*\* There are several options to fulfill this requirement. See your academic advisor for a specific list.

**SEMESTER 4 ACTION ITEMS**

1. After reviewing your program of study, meet with your advisor to apply for the Advanced Manufacturing/Mechatronics Technology A.A.S.
2. Sign up for Commencement.
3. Join the [Alumni Network!](#)

**PATHWAY TOTAL: 60 SEMESTER CREDIT HOURS**