

Marshalltown Community College

Associate of Applied Science (A.A.S.) – Electro-Mechanical Systems Technologist

Transfer guide to the [University of Northern Iowa](#)

Bachelor of Science (B.S.) – Automation Engineering Technology

1. When will I graduate?

Students transferring to UNI from this A.A.S. program at MCC should **expect to complete 77 credits at UNI**. Assuming that the student is starting at UNI during the fall semester, it will take roughly five semesters (two and a half years, a fall/spring/fall/spring/fall sequence), with no summer coursework, to graduate.

Transfer Credit Summary	Credits
A.A.S. credits transferring directly into UNI program	24
Other credits transferring to UNI (Gen eds or electives)	19
Total credits transferring towards UNI degree	43
Total credits needed at UNI	77 (120 total)

2. Which A.A.S. courses transfer directly into the AET major?

Upon completion of this A.A.S. degree, the following courses within the listed program at UNI will be completed:

- STAT 1772 – Introduction to Statistical Methods (3 cred.)
 - Students must complete **MAT 156** – Statistics at MCC.
- TECH 1037 – Introduction to Circuits (3 cred.)
- TECH 1039 – Circuits & Systems (3 cred.)
- TECH 3164 – Programmable Logic Controllers (3 cred.)
- ENGLISH 3772 – Technical Writing for Engineering Technologists (3 cred.)
 - Students must complete **ENG 111** – Technical Writing at Iowa Valley.
- AET Electives (9 cred.)

3. Which A.A.S. courses transfer directly to UNI as “gen eds” or electives?

Other courses built into this A.A.S. curriculum, or open electives, will also transfer to UNI. The following courses are required to complete at MCC as part of this A.A.S. curriculum:

- Social/Behavioral Science course (3 cred.)
 - Students should complete **PSY 111** – Introduction to Psychology **or** **SOC 110** – Introduction to Sociology at MCC.
- Additional university electives transferring (16 cred.)



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4. What would I study at UNI?

By completing the recommended A.A.S. degree plan, the student would be required to complete the courses in black, listed below, at UNI.

Math/Science Coursework		Cr.
CS 1160	C/C++ Programming	3
MATH 1150 or MATH 1420	Calculus for Technology or Calculus I	4
PHYSICS 1511	General Physics I	4
STAT 1772	Intro to Statistical Methods	3
Total Credits Remaining		11

Technical Core		Cr.
ENGR 1000	Intro. to Eng. & Prof. Practices	3
TECH 1010	Fund. of Metal Removal	3
TECH 1024	Engineering Design with CAD	3
TECH 1037	Introduction to Circuits	3
TECH 1039	Circuits & Systems	3
PHIL 1560	Science, Technology & Ethics	3
TECH 2053	Digital Electronics	4
TECH 2055	Elec. Power Systems & Mach.	4
TECH 2065	Industrial Robotics	3
ENGR 2080	Statics	2
ENGR 2180	Strengths of Materials	2
TECH 3147	Computer-Aided Manufacturing	3
TECH 3148	Machine Design	3
TECH 3160	Comp.-Aided Instru. & Inter.	3
TECH 3164	Prog. Logic Controllers	3
TECH 4162	Hydraulics & Pneumatics	3
ENGR 4500	Senior Design	3
ENGLISH 3772	Tech. Writing for Eng. Tech.	3
	AET Electives	15
Total Credits Remaining		42

UNI Foundational Inquiry (UNIFI)		Cr.
WR - Written Communication		3
OC - Oral Communication		3
QR - Quantitative Reasoning		3
HD - Human Condition (Domestic)		3
HG - Human Condition (Global)		3
SR - Scientific Reasoning (with Lab)		4
HE - Human Expression		3
RE - Responsibility		3
UNIFI certificate or UNIFI electives		12
Total UNIFI Credits Remaining		24

Credits needed to earn UNI degree 77

5. How would I complete my degree?

Based on the remaining coursework, below is a semester-by-semester breakdown of how the student would complete any remaining requirements at UNI.

Fall 1	Cr.
CS 1160	3
PHYSICS 1511	4
ENGR 1000	3
TECH 1024	3
UNIFI course	3
Total	16

Spring 1	Cr.
MATH 1150	4
PHIL 1560	3
TECH 1010	3
UNIFI course	3
UNIFI course	3
Total	16

Fall 2	Cr.
TECH 2053	4
TECH 2065	3
ENGR 2080	2
UNIFI course	3
UNIFI course	3
Total	15

Spring 2	Cr.
TECH 2055	4
ENGR 2180	2
TECH 3147	3
TECH 3160	3
UNIFI course	3
Total	15

Fall 3	Cr.
TECH 3148	3
TECH 4162	3
ENGR 4500	3
UNIFI course	3
UNIFI course	3
Total	15

Other Important Information

- This transfer guide is based off the 2025-2026 academic catalogs at UNI & Marshalltown Community College.
- Courses listed in the Remaining UNI Plan of Study (section 5) are subject to change at any time. This plan assumes transfer students start in the fall semester.
- This transfer guide assumes the student is only transferring in coursework from this A.A.S. degree plan. Students **may transfer additional credits to UNI**, which will be evaluated on an individual basis.
- The UNI Foundational Inquiry (UNIFI) at UNI is the collection of general education courses required by the institution to fulfill the university's mission. For more information, visit unifi.uni.edu.