

Kirkwood Community College

Associate of Applied Science (A.A.S.) – CAD/Mechanical Engineering Technology

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 Kirkwood should **expect to complete 61 credits at UNI**. Assuming that the student is starting at UNI during the fall semester, it will take roughly four semesters (two years, a fall/spring/fall/spring sequence), with no summer coursework, to graduate.

Transfer Credit Summary	Credits
A.A.S. credits transferring directly into UNI program	31
Other credits transferring to UNI (Gen eds or electives)	28
Total credits transferring towards UNI degree	59
Total credits needed at UNI	61 (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:

- MATH 1420 – Calculus I (4 cred.)
 - Students must complete **MAT 210** – Calculus I at Kirkwood.
- PHYSICS 1511 – General Physics I (4 cred.)
 - Students must complete **PHY 162** – College Physics I **or** **PHY 212** – Classical Physics I at Kirkwood.
- TECH 1010 – Fundamentals of Metal Removal (3 cred.)
- TECH 1024 – Engineering Design with CAD (3 cred.)
- TECH 1037 – Introduction to Circuits (3 cred.)
 - Students must complete **ELT 345** – Electric Circuits I at Kirkwood as an Engineering/Manufacturing elective.
- TECH 2065 – Industrial Robotics (3 cred.)
 - Students must complete **ATR 105** – Industrial Robotics at Kirkwood as an Engineering/Manufacturing elective.
- ENGR 2080 – Statics (2 cred.)
 - Students must complete **EGR 180** – Statics at Kirkwood as an Engineering/Manufacturing elective.
- 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 Kirkwood as part of this A.A.S. curriculum:

- Communications course (3 cred.)
 - Students should complete **ENG 105** – Composition I & **ENG 106** – Composition II at Kirkwood.
- Humanities or History/Culture course (3 cred.)
 - Students should complete one of the following courses at Kirkwood:
 - **HIS 151** – U.S. History to 1877
 - **HIS 152** – U.S. History since 1877
- **PSY 111** – Introduction to Psychology (3 cred.)
- Additional university electives transferring (19 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		6

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	9
Total Credits Remaining		40

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		6
Total UNIFI Credits Remaining		15

Credits needed to earn UNI degree 61

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
ENGR 1000	3
ENGR 2180	2
ENGLISH 3772	3
UNIFI course	3
Total	14

Spring 1	Cr.
STAT 1772	3
TECH 1039	3
PHIL 1560	3
TECH 3147	3
UNIFI course	3
Total	15

Fall 2	Cr.
TECH 2053	4
TECH 3148	3
TECH 4162	3
UNIFI course	3
UNIFI course	3
Total	16

Spring 2	Cr.
TECH 2055	4
TECH 3160	3
TECH 3164	3
ENGR 4500	3
UNIFI course	3
Total	16

Other Important Information

- This transfer guide is based off the 2025-2026 academic catalogs at UNI & Kirkwood 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.