

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.) – Mechanical Engineering Technology

1. When will I graduate?

Students transferring to UNI from this A.A.S. program at Kirkwood should **expect to take 65 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 two summer courses, to graduate.

Transfer Credit Summary	Credits
A.A.S. credits transferring directly into UNI program	46
Other credits transferring to UNI	9
Total credits transferring towards UNI degree	55
Total credits needed at UNI	65 (120 total)

2. What A.A.S. courses transfer?

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

- PHYSICS 1511 – General Physics I (4 cred.)
 - Students must complete PHY 162 – College Physics I **or** PHY 190 – Physics I & PHY 192 – Physics II at Kirkwood.
- TECH 1010 – Fundamentals of Metal Removal (3 cred.)
- TECH 1024 – Engineering Design with CAD (3 cred.)
- TECH 2024 – Technical Drawing with GD&T (3 cred.)
- ENGR 2080 – Statics (2 cred.)
- ENGR 2180 – Strengths of Materials (2 cred.)
- TECH 3024 – Solid Modeling & Additive Manufacturing for Design (3 cred.)
- TECH 3148 – Machine Design (3 cred.)
- TECH 4162 – Hydraulics & Pneumatics (3 cred.)
- Additional university electives transferring (20 cred.)

3. What other courses transfer?

Other courses built into this A.A.S. curriculum, or open electives, will also transfer to UNI. The following courses are recommended to take 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.)



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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 1510 or CS 1160	Introduction to Computing or C/C++ Programming	3
CHEM 1020 or CHEM 1110	Chemical Technology or General Chemistry I	4
MATH 1420	Calculus I	4
PHYSICS 1511	General Physics I	4
Total Credits Remaining		11

Technical Core		Cr.
ENGR 1000	Intro. to Eng. & Prof. Practices	3
TECH 1008	Basic Manufacturing Processes	3
TECH 1010	Fund. of Metal Removal	3
TECH 1024	Engineering Design with CAD	3
PHIL 1560	Science, Technology & Ethics	3
TECH 2024	Technical Drawing with GD&T	3
TECH 2036	Power Technology	3
TECH 2065	Industrial Robotics	3
TECH 2072	Engineering Materials	3
ENGR 2080	Statics	2
ENGR 2180	Strengths of Materials	2
TECH 3024	Solid Modeling & Add. Manuf.	3
TECH 3127	Applied Thermodynamics	3
TECH 3135	Product Design	3
TECH 3136	Principles of Metal Casting	3
TECH 3148	Machine Design	3
TECH 4137	Tooling Pract. in Metal Casting	3
TECH 4162	Hydraulics & Pneumatics	3
ENGR 4500	Senior Design	3
ENGLISH 3772	Tech. Writing for Eng. Tech.	3
Total Credits Remaining		36

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		9
Total UNIFI Credits Remaining		18

Credits needed to earn UNI degree 65

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.	
CHEM 1020	4	
MATH 1420	4	
ENGR 1000	3	
TECH 1008	3	
Total		14

Spring 1	Cr.	
CS 1160	3	
PHIL 1560	3	
TECH 2036	3	
TECH 2072	3	
UNIFI course	3	
Total		15

Summer 1	Cr.	
UNIFI course	3	
UNIFI course	3	
Total		6

Fall 2	Cr.	
TECH 2065	3	
TECH 3136	3	
TECH 4137	3	
ENGLISH 3772	3	
UNIFI course	3	
Total		15

Spring 2	Cr.	
TECH 3127	3	
TECH 3135	3	
ENGR 4500	3	
UNIFI course	3	
UNIFI course	3	
Total		15

Other Important Information

- This transfer guide is based off of the 2024-2025 academic catalogs at UNI & Kirkwood Community College and includes future adjustments to the UNI curriculum.
- Courses listed in the Remaining UNI Plan of Study section are subject to change at any time and are based on a fall semester start.
- 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 universities mission. For more information, visit unifi.uni.edu.