

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 take 69 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	42
Other credits transferring to UNI	9
Total credits transferring towards UNI degree	51
Total credits needed at UNI	69 (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:

- MATH 1150 – Calculus for Technology (4 cred.)
 - Students must complete MAT 745 – Technical Math I & MAT 746 – Technical Math II at Kirkwood.
- 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 Materials Removal (3 cred.)
- TECH 1024 – Engineering Design with CAD (3 cred.)
- ENGR 2080 – Statics (2 cred.)
- ENGR 2180 – Strengths of Materials (2 cred.)
- TECH 3148 – Machine Design (3 cred.)
- TECH 4162 – Automation: Pneumatics & Hydraulics (3 cred.)
- AET Electives (15 cred.)
- Additional university electives transferring (3 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.)



Kirkwood Community College

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

Transfer guide to the [University of Northern Iowa](http://www.uni.edu)

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

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

AET Technical Core		Cr.
ENGR 1000	Intro. to Eng. & Prof. Practices	3
PHIL 1560	Science, Technology & Ethics	3
TECH 1010	Fund. of Materials Removal	3
TECH 1024	Engineering Design with CAD	3
TECH 1037	Intro to Circuits	3
TECH 1039	Circuits & Systems	3
TECH 2053	Digital Electronics & Lab	4
TECH 2055	Electrical Power & Mach. & Lab	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	Automation: Pneu & Hydraul.	3
ENGR 4500	Senior Design	3
ENGLISH 3772	Tech. Writing for Eng. Tech.	3
	AET Electives	15
Total Credits Remaining		38

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		25

Credits needed to earn UNI degree 69

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
TECH 1037	3
UNIFI course	3
UNIFI course	3
Total	15

Spring 1	Cr.
STAT 1772	3
PHIL 1560	3
TECH 1039	3
UNIFI course	4
UNIFI course	3
Total	16

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

Fall 2	Cr.
TECH 2053	4
TECH 2065	3
ENGLISH 3772	3
UNIFI course	3
UNIFI course	3
Total	16

Spring 2	Cr.
TECH 2055	4
TECH 3147	3
TECH 3160	3
TECH 3164	3
ENGR 4500	3
Total	16

Other Important Information

- This transfer guide is based off of the 2023-2024 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.