University of Northern Iowa

**Department of Applied Engineering & Technical Management Transfer Guide**

# Northeast Iowa Community College

## Associate of Applied Science (A.A.S.) – Industrial Automation & Mechatronics

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 NICC should **expect to take 74 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 | 37 |
| Other credits transferring to UNI | 9 |
| Total credits transferring towards UNI degree | 46 |
| **Total credits needed at UNI** | **74** (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:

- TECH 1037 – Introduction to Circuits (3 cred.)
- TECH 3160 – Computer-Aided Instrumentation & Interfacing (3 cred.)
- TECH 3164 – Programmable Logic Controllers (3 cred.)
- TECH 4162 – Automation: Pneumatics & Hydraulics (3 cred.)
- AET Electives (15 cred.)
- Additional university electives transferring (10 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 NICC as part of this A.A.S. curriculum:

- ENV 115 – Environmental Science (3 cred.)
- PSY 112 – Psychology of Human Relations (3 cred.)
- SPC 112 – Public Speaking (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 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** | **14** |

| 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 & Hydrau.~~ | ~~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 | 9 |
| **Total UNIFI Credits Remaining** | **18** |

| | |
|---|---|
| **Credits needed to earn UNI degree** | **74** |

### 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 |
| TECH 1039 | 3 |
| | |
| | |
| **Total** | **13** |

| Fall 2 | Cr. |
|---|---|
| STAT 1772 | 3 |
| TECH 2053 | 4 |
| TECH 2065 | 3 |
| ENGR 2080 | 2 |
| ENGLISH 3772 | 3 |
| | |
| **Total** | **15** |

| Spring 2 | Cr. |
|---|---|
| TECH 2055 | 4 |
| ENGR 2180 | 2 |
| TECH 3147 | 3 |
| UNIFI course | 3 |
| UNIFI course | 3 |
| | |
| **Total** | **15** |

| Fall 3 | Cr. |
|---|---|
| TECH 3148 | 3 |
| ENGR 4500 | 3 |
| UNIFI course | 3 |
| UNIFI course | 3 |
| UNIFI course | 3 |
| | |
| **Total** | **15** |

### Other Important Information

- This transfer guide is based off of the 2023-2024 academic catalogs at UNI & Northeast Iowa 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.