

Automation Engineering Technology

- Bachelor of Science (B.S.)
- Program Curriculum



Mathematics/Science coursework 15 cr.

CS 1160 - C/C++ Programming	4 cr.
MATH 1150 - Calculus for Technology	4 cr.
PHYSICS 1511 - General Physics I	4 cr.
• course also satisfies UNIFI Scientific Reasoning requirement.	
STAT 1772 - Introduction to Statistical Methods	3 cr.
• course also satisfies UNIFI Quantitative Reasoning requirement.	

Technical Core 45 cr.

TECH 1010 - Metal Removal Processes	3 cr.
TECH 1024 - Technical Drawing & Design I	3 cr.
TECH 1037 - Introduction to Circuits	3 cr.
TECH 1039 - Circuits & Systems	3 cr.
TECH 2038 - Introduction to Electrical Power & Machinery	3 cr.
TECH 2042 - Introduction to Digital Electronics	3 cr.
TECH 2060 - Fundamentals of Automated Manufacturing	3 cr.
TECH 2080 - Statics & Strengths of Materials	3 cr.
TECH 3147 - Computer-Aided Manufacturing	3 cr.
TECH 3148 - Machine Design	3 cr.
TECH 3160 - Computer-Aided Instrumentation & Interfacing	3 cr.
TECH 3164 - Programmable Logic Controllers	3 cr.
TECH 4162 - Automation-Hydraulics & Pneumatics	3 cr.
TECH 4210 - Manufacturing Senior Projects	
or TECH 4220 - Senior Design	3 cr.
ENGLISH 3772 - Tech. Writing for Engineering Technologists	3 cr.

Technical Electives (students must choose 15 credits)

TECH 1008 - Basic Manufacturing Processes	3 cr.
TECH 2024 - Technical Drawing & Design II	3 cr.
TECH 2119 - Computer Applications in Technology	3 cr.
TECH 2041 - Intro to Analog Electronics	3 cr.
TECH 2072 - Engineering Materials	3 cr.
TECH 3113 - Manufacturing Tooling	3 cr.
TECH 3129 - Linear Control Systems	3 cr.
TECH 3142 - Statistical Quality Control	3 cr.
TECH 3143 - Managing Operations & Manuf. Systems	3 cr.
TECH 3152 - Advanced Analog Electronics	3 cr.
TECH 3156 - Advanced Digital Electronics	3 cr.
TECH 3157 - Microcontroller Applications	3 cr.
TECH 3166 - Advanced Electrical Power Systems	3 cr.
TECH 3196 - Industrial Safety	3 cr.
TECH 4103 - Electronic Communications	3 cr.
TECH 4104 - Applied Digital Signal Processing	3 cr.
TECH 4165 - Wireless Communication Networks	3 cr.
TECH 4167 - Power Electronics Applications	3 cr.

UNI Foundational Inquiry 37 cr.

Written Communications	3 cr.
Oral Communications	3 cr.
Quantitative Reasoning	3 cr.
• requirement completed with STAT 1772.	
Human Condition (Domestic)	3 cr.
Human Condition (Global)	3 cr.
Scientific Reasoning	4 cr.
• requirement completed with PHYSICS 1511.	
Human Expression	3 cr.
Responsibility	3 cr.
UNIFI Elective	3 cr.
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Inspired by the University of Northern Iowa mission to engage students in high-quality and high-impact learning experiences within a challenging and supportive environment, UNI's new general education requirements are designed to ensure that students' foundational learning experiences lead to a lifetime full of potential. For more information, visit unifi.uni.edu.

Credit Totals

Math/Science coursework	15 cr.
Technical Core coursework	45 cr.
Technical electives	15 cr.
UNI Foundational Inquiry (UNIFI)	37 cr.
Credits counted twice (major & UNIFI)	-7 cr.
Total	105 cr.
University Electives needed	21 cr.
Grand Total	126 cr.

Department of Applied Engineering & Technical Management

University of Northern Iowa
 25 Industrial Technology Center
 Cedar Falls, IA 50614-0178
 Phone: (319) 273-2561 | E-mail: appliedengineering@uni.edu

Important ALEKS Test Information

The ALEKS test is a math placement test that all UNI students must complete prior to enrolling in certain math & science courses. Below are the scores required for the math & science requirements in this program:

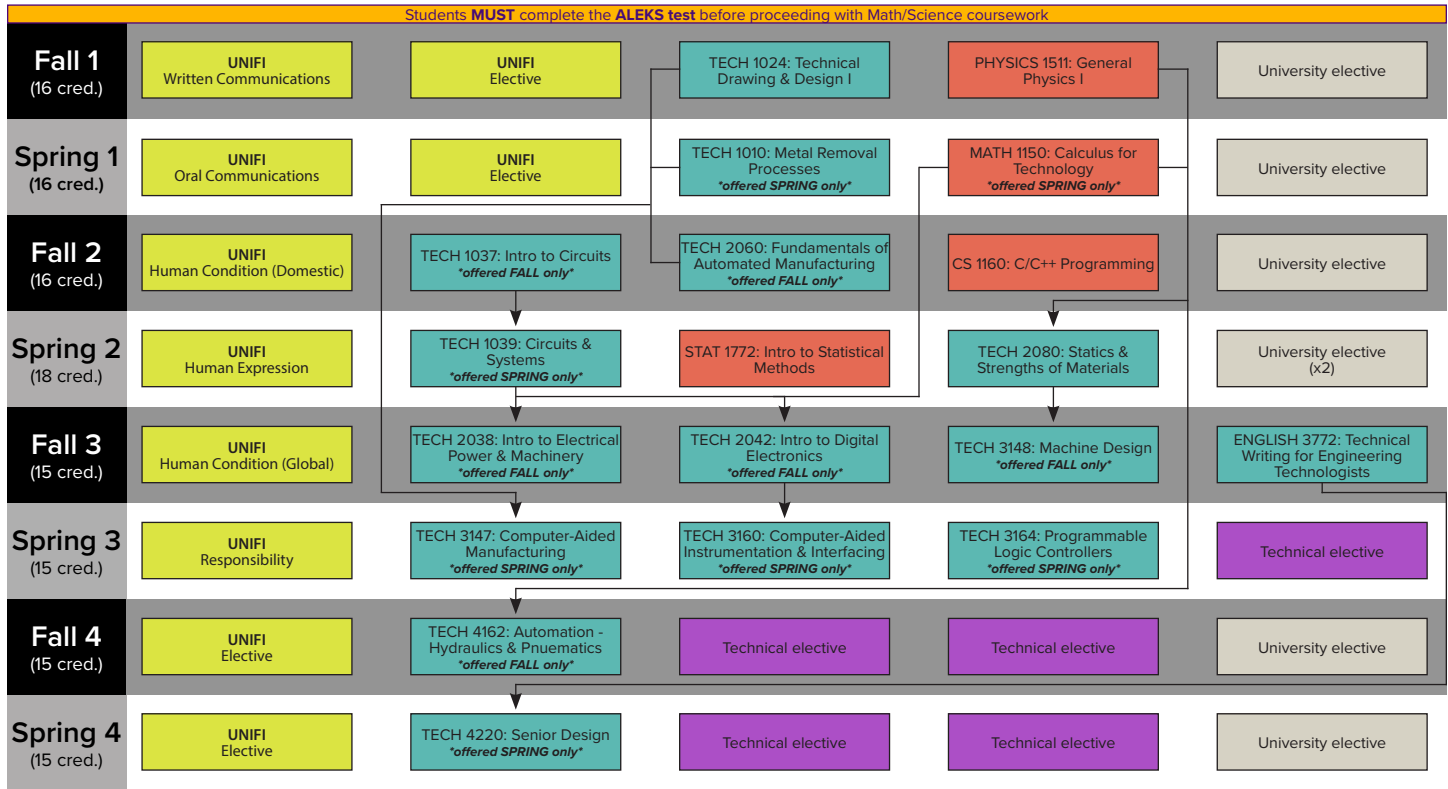
- PHYSICS 1511: 45
- STAT 1772: 50
- MATH 1150: 61

Automation Engineering Technology

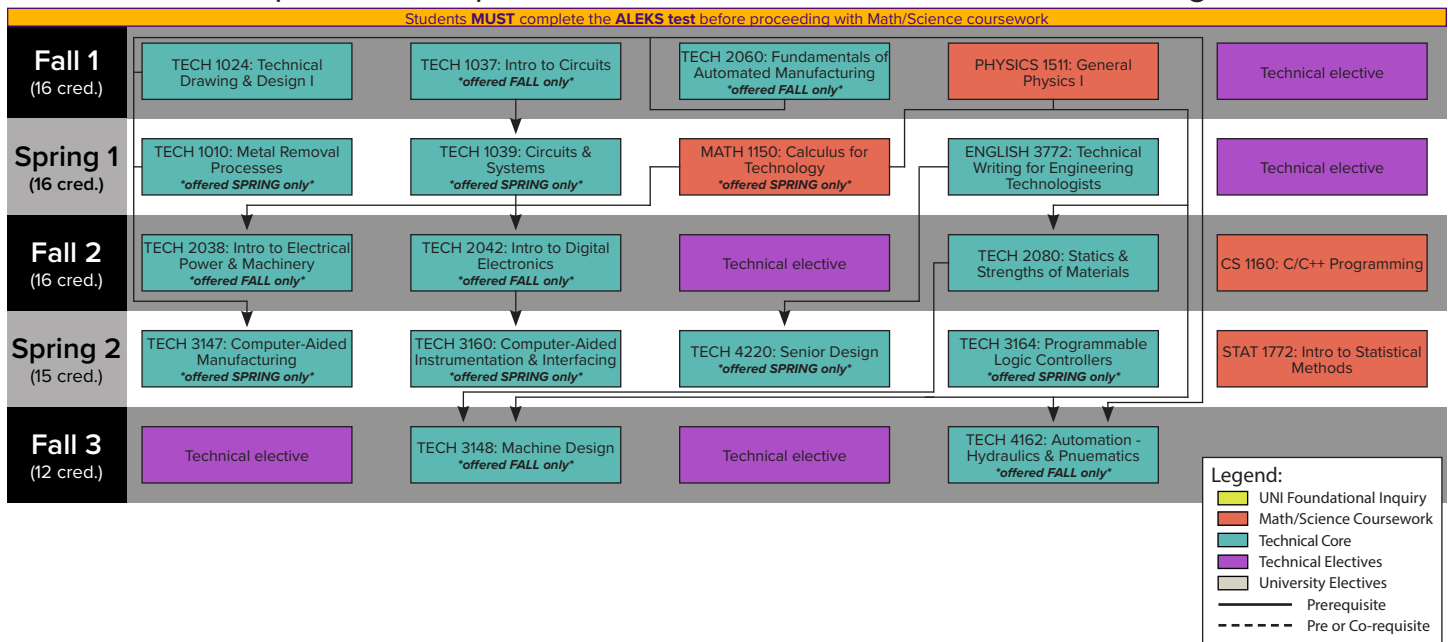
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Example course sequence for *first-year, freshman* students



Example course sequence for *transfer student with an A.A. or A.S. degree*



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