

Electrical Engineering Technology

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



Mathematics/Science coursework	18 cr.
CS 1160 - C/C+ Programming	3 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.	
Math coursework (select two from the list below)	8 cr.
• MATH 1140 - Precalculus	4 cr.
• MATH 1150 - Calculus for Technology	4 cr.
• MATH 1420 - Calculus I	4 cr.
• MATH 1421 - Calculus II	4 cr.

Technical Core	54 cr.
ENGR 1000 - Introduction to Eng. & Professional Practice	3 cr.
PHIL 1560 - Science, Technology & Ethics	3 cr.
• course also satisfies UNIFI Responsibility requirement.	
TECH 1037 - Introduction to Circuits	3 cr.
TECH 1039 - Circuits & Systems	3 cr.
TECH 2051 - Analog Electronics	4 cr.
TECH 2053 - Digital Electronics	4 cr.
TECH 2055 - Electrical Power Systems & Machinery	4 cr.
TECH 3129 - Linear Control Systems	3 cr.
TECH 3157 - Microcontroller Applications	3 cr.
TECH 3160 - Computer-Aided Instrumentation & Interfacing	3 cr.
TECH 3164 - Programmable Logic Controllers (PLCs)	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 Application	3 cr.
ENGR 4500 - Senior Design	3 cr.
ENGLISH 3772 - Tech. Writing for Eng. Technologists	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.
• requirement completed with PHIL 1560.	

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	18 cr.
Technical Core coursework	54 cr.
UNI Foundational Inquiry (UNIFI)	37 cr.
Credits counted twice (major & UNIFI)	-10 cr.
Total	99 cr.
University Electives needed	21 cr.
Grand Total	120 cr.

Department of Applied Engineering & Technical Management

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 25 Industrial Technology Center
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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

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

<p>Fall 1</p> UNIFI Written Communication course 3 cr. UNIFI elective course 3 cr. MATH 1140 - Precalculus 4 cr. ENGR 1000 - Introduction to Engineering & Professional Practices ^{FO} 3 cr. TECH 1037 - Introduction to Circuits ^{FO} 3 cr. <p style="text-align: right;">Total: 16 cr.</p>	<p>Spring 1</p> UNIFI Oral Communication course 3 cr. UNIFI elective course 3 cr. MATH 1150 - Calculus for Technology ^{SO} 4 cr. TECH 1039 - Circuits & Systems ^{SO} 3 cr. University elective course 3 cr. <p style="text-align: right;">Total: 16 cr.</p>
<p>Fall 2</p> UNIFI Human Condition (Domestic) course 3 cr. CS 1160 - C/C+ Programming 3 cr. TECH 2051 - Analog Electronics ^{FO} 4 cr. TECH 2053 - Digital Electronics ^{FO} 4 cr. <p style="text-align: right;">Total: 14 cr.</p>	<p>Spring 2</p> UNIFI Human Expression course 3 cr. PHYSICS 1511 - General Physics I 4 cr. PHIL 1560 - Science, Technology & Ethics 3 cr. TECH 2055 - Electrical Power Systems & Machinery ^{SO} 4 cr. <p style="text-align: right;">Total: 14 cr.</p>
<p>Fall 3</p> UNIFI Human Condition (Global) course 3 cr. STAT 1772 - Introduction to Statistical Methods 3 cr. TECH 3129 - Linear Control Systems ^{FO} 3 cr. TECH 3157 - Microcontroller Applications ^{FO} 3 cr. University elective course 3 cr. <p style="text-align: right;">Total: 15 cr.</p>	<p>Spring 3</p> TECH 3160 - Computer-Aided Instrumentation & Interfacing ^{SO} 3 cr. TECH 3164 - Programmable Logic Controllers (PLCs) ^{SO} 3 cr. ENGLISH 3772 - Technical Writing for Engineering Technologists [^] 3 cr. University elective course 3 cr. University elective course 3 cr. <p style="text-align: right;">Total: 15 cr.</p>
<p>Fall 4</p> UNIFI elective course 3 cr. TECH 4103 - Electronic Communications ^{FO} 3 cr. TECH 4165 - Wireless Communications Networks ^{FO} 3 cr. University elective course 3 cr. University elective course 3 cr. <p style="text-align: right;">Total: 15 cr.</p>	<p>Spring 4</p> UNIFI elective course 3 cr. TECH 4104 - Applied Digital Signal Processing ^{SO} 3 cr. TECH 4167 - Power Electronics Applications ^{SO} 3 cr. ENGR 4500 - Senior Design [^] 3 cr. University elective course 3 cr. <p style="text-align: right;">Total: 15 cr.</p>

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

<p>Fall 1</p> MATH 1140 - Precalculus 4 cr. PHYSICS 1511 - General Physics I 4 cr. ENGR 1000 - Introduction to Engineering & Professional Practices ^{FO} 3 cr. TECH 1037 - Introduction to Circuits ^{FO} 3 cr. <p style="text-align: right;">Total: 14 cr.</p>	<p>Spring 1</p> MATH 1150 - Calculus for Technology ^{SO} 4 cr. STAT 1772 - Introduction to Statistical Methods 3 cr. TECH 1039 - Circuits & Systems ^{SO} 3 cr. TECH 3164 - Programmable Logic Controllers (PLCs) ^{SO} 3 cr. ENGLISH 3772 - Technical Writing for Engineering Technologists [^] 3 cr. <p style="text-align: right;">Total: 16 cr.</p>
<p>Fall 2</p> CS 1160 - C/C+ Programming 3 cr. PHIL 1560 - Science, Technology & Ethics 3 cr. TECH 2051 - Analog Electronics ^{FO} 4 cr. TECH 2053 - Digital Electronics ^{FO} 4 cr. <p style="text-align: right;">Total: 14 cr.</p>	<p>Spring 2</p> TECH 2055 - Electrical Power Systems & Machinery ^{SO} 4 cr. TECH 3160 - Computer-Aided Instrumentation & Interfacing ^{SO} 3 cr. TECH 4104 - Applied Digital Signal Processing ^{SO} 3 cr. TECH 4167 - Power Electronics Applications ^{SO} 3 cr. <p style="text-align: right;">Total: 13 cr.</p>
<p>Fall 3</p> TECH 3129 - Linear Control Systems ^{FO} 3 cr. TECH 3157 - Microcontroller Applications ^{FO} 3 cr. TECH 4103 - Electronic Communications ^{FO} 3 cr. TECH 4165 - Wireless Communications Networks ^{FO} 3 cr. ENGR 4500 - Senior Design [^] 3 cr. <p style="text-align: right;">Total: 15 cr.</p>	

Legend
[^] - course requires a prerequisite.
[%] - course requires a co-requisite.
^{FO} - course is only offered in the fall.
^{SO} - course is only offered in the spring.

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