

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

University of Northern Iowa
Applied Engineering Building
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 1140: 61

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

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

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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