Technology & Engineering Education

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

UNI / University of Northern Iowa

Mathematics/Science coursework — 12 cr.

CHEM 1020 - Chemical Technology	4 cr.
• course also satisfies UNIFI Scientific Reasoning requirement.	
MATH 1140 - Precalculus	4 cr.
PHYSICS 1000 & 1010 - Physics in Everyday Life & Lab *or* PHYSICS 1511 - General Physics I	4 cr.
• course also satisfies UNIFI Scientific Reasoning requirement.	

Technology & Engineering Core — 24 cr.

TECH 1008 - Basic Manufacturing Processes	3 cr.
TECH 1010 - Metal Removal Processes	3 cr.
TECH 1024 - Technical Drawing & Design I	3 cr.
TECH 1037 - Introduction to Circuits *or*	3 cr.
TECH 3164 - Programmable Logic Controllers	3 cr.
TECH 1055 - Graphic Communications Foundations	3 cr.
TECH CM 1000 - Introduction to Construction Processes	3 cr.
TECH TEE 2020 - Transportation Technology	3 cr.
TECH TEE 3030 - Robotics & Sensors	3 cr.

Technology & Engineering Education Core — 12 cr.

TECH TEE 1000 - Intro. to Technology & Eng. Education	3 cr.
TECH TEE 3100 - Tech. & Eng. Edu. Curriculum Planning	3 cr.
TECH TEE 3150 - Tech. & Eng. Education Lab Management	3 cr.
TECH TEE 4100 - Tech. & Eng. Edu. Level 3 Teaching Exp.	1 cr.
TECH TEE 4200 - Tech. & Eng. Education Methods	2 cr.

Teacher Licensure coursework — 30 cr.

TEACHING 2017 - Level 1 Field Exp.: Exploring Teaching	1 cr.
EDPSYCH 2030 - Dynamics of Human Development	3 cr.
• course also satisfies UNIFI Human Condition (Domestic) requirement.	
SPED 3150 - Meeting the Needs of Diverse Learners in Classrooms	2 cr.
TEACHING 3128 - Lvl. 2 Field Exp.: Lesson Planning & Instruction	1 cr.
EDPSYCH 3148 - Learning & Motivation in Classroom Contexts	3 cr.
MEASURES 3150 - Classroom Assessment	2 cr.
SOCFOUND 3119 - Schools & American Society	3 cr.
TEACHING 4170 - Human Relations - Awareness & Application	3 cr.
TEACHING 3138 - Secondary School Teaching	12 cr.

UNI Foundational Inquiry — 37 cr.

Written Communications	3 cr.
Oral Communications	3 cr.
Quantitative Reasoning	3 cr.
Human Condition (Domestic)	3 cr.
• requirement completed with EDPSYCH 2030.	
Human Condition (Global)	3 cr.
Scientific Reasoning	4 cr.
• requirement completed with PHYSICS 1000 or 1511.	
Human Expression	3 cr.
Responsibility	3 cr.
UNIFI Elective	3 cr.
• requirement completed with CHEM 1020.	
UNIFI Elective	3 cr.
UNIFI Elective	3 cr.
UNIFI Elective	3 cr.

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	12 cr.
Technology & Engineering Core	24 cr.
Technology & Engineering Edu. Core	12 cr.
Teacher Licensure coursework	30 cr.
UNI Foundational Inquiry (UNIFI)	37 cr.
Credits counted twice (major & UNIFI)	-10 cr.
Total	**105 cr.**
University Electives needed	15 cr.
Grand Total	**120 cr.**

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
- MATH 1140: 61

Technology & Engineering Education
- Bachelor of Science (B.S.)
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UNI / University of Northern Iowa

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

Fall 1
UNIFI Written Communication course	3 cr.
UNIFI Quantitative Reasoning course	3 cr.
TECH 1008 - Basic Manufacturing Processes[FO]	3 cr.
TECH 1055 - Graphic Communication Foundations[FO]	3 cr.
TECH TEE 1000 - Intro. to Technology & Engineering Education[FO]	3 cr.
	Total: 15 cr.

Spring 1
UNIFI Oral Communication course	3 cr.
MATH 1140 - Precalculus	4 cr.
TECH 1010 - Metal Removal Processes[SO]	3 cr.
TEACHING 2017 - Level 1 Field Experience	1 cr.
EDPSYCH 2030 - Dynamics of Human Development	3 cr.
University elective course	3 cr.
	Total: 17 cr.

Fall 2
UNIFI Human Condition (Global) course	3 cr.
PHYSICS 1000 & PHYSICS 1010 - Physics in Everyday Life & Lab	4 cr.
TECH 1024 - Technical Drawing & Design I[FO]	3 cr.
TECH CM 1000 - Introduction to Construction Processes	3 cr.
SPED 3150 - Meeting the Needs of Diverse Learners in Classrooms^	2 cr.
	Total: 15 cr.

Spring 2
UNIFI Human Expression course	3 cr.
TECH TEE 3100 - Tech. & Eng. Education Curriculum Planning^SO	3 cr.
EDPSYCH 3148 - Learning & Motivation in Classroom Contexts^	3 cr.
MEASURES 3150 - Classroom Assessment^%	2 cr.
TEACHING 3128 - Level 2 Field Experience: Lesson Planning & Instruction%	1 cr.
University elective course	3 cr.
	Total: 15 cr.

Fall 3
UNIFI elective course	3 cr.
UNIFI elective course	3 cr.
CHEM 1020 - Chemical Technology	4 cr.
TECH TEE 3030 - Robotics & Sensors^	3 cr.
University elective course	3 cr.
	Total: 16 cr.

Spring 3
UNIFI Responsibility course	3 cr.
TECH 3164 - Programmable Logic Controllers[SO]	3 cr.
TECH TEE 2020 - Transportation Technology[SO]	3 cr.
TECH TEE 3050 - Tech. & Eng. Education Lab Management^SO	3 cr.
University elective course	3 cr.
	Total: 15 cr.

Fall 4
UNIFI elective course	3 cr.
TECH TEE 4100 - Tech. & Eng. Education Level 3 Teaching Experience^FO	1 cr.
TECH TEE 4200 - Tech. & Eng. Education Methods^FO	2 cr.
SOCFOUND 3119 - Schools & American Society	3 cr.
TEACHING 4170 - Human Relations-Awareness & Application	3 cr.
University elective course	3 cr.
	Total: 15 cr.

Spring 4
TEACHING 3138 - Secondary School Teaching	12 cr.
	Total: 12 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.

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

Fall 1
TECH 1008 - Basic Manufacturing Processes[FO]	3 cr.
TECH 1055 - Graphic Communication Foundations[FO]	3 cr.
TECH TEE 1000 - Intro. to Technology & Engineering Education[FO]	3 cr.
TEACHING 2017 - Level 1 Field Experience	1 cr.
EDPSYCH 2030 - Dynamics of Human Development	3 cr.
SPED 3150 - Meeting the Needs of Diverse Learners in Classrooms^	2 cr.
	Total: 15 cr.

Spring 1
CHEM 1020 - Chemical Technology	4 cr.
PHYSICS 1000 & PHYSICS 1010 - Physics in Everyday Life & Lab	4 cr.
TECH 1010 - Metal Removal Processes[SO]	3 cr.
TECH CM 1000 - Introduction to Construction Processes	3 cr.
TECH TEE 3100 - Tech. & Eng. Education Curriculum Planning^SO	3 cr.
TEACHING 3128 - Level 2 Field Experience: Lesson Planning & Instruction%	1 cr.
	Total: 18 cr.

Fall 2
TECH 1024 - Technical Drawing & Design I[FO]	3 cr.
TECH TEE 3030 - Robotics & Sensors[FO]	3 cr.
TECH TEE 4100 - Tech. & Eng. Education Level 3 Teaching Experience^FO	1 cr.
TECH TEE 4200 - Tech. & Eng. Education Methods^FO	2 cr.
EDPSYCH 3148 - Learning & Motivation in Classroom Contexts^	3 cr.
SOCFOUND 3119 - Schools & American Society	3 cr.
	Total: 15 cr.

Spring 2
MATH 1140 - Precalculus	4 cr.
TECH 3164 - Programmable Logic Controllers[SO]	3 cr.
TECH TEE 2020 - Transportation Technology[SO]	3 cr.
TECH TEE 3050 - Tech. & Eng. Education Lab Management^SO	3 cr.
MEASURES 3150 - Classroom Assessment^	2 cr.
TEACHING 4170 - Human Relations-Awareness & Application	3 cr.
	Total: 18 cr.

Fall 3
TEACHING 3138 - Secondary School Teaching	12 cr.
	Total: 12 cr.

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