

CONSTRUCTION ENGINEERING

Description

Construction engineering (CONE) is a program of the Charles W. Durham School of Architectural Engineering and Construction. The construction engineering major integrates engineering, construction and management courses. This program is designed for persons fulfilling the construction industry's need for licensed professional engineers. It resembles the construction management program but provides a greater emphasis on engineering, scientific, and technical courses to meet the requirements for licensure as a professional engineer. The courses focus on the application of engineering principles to solve real-world construction problems. They include instruction in civil engineering, structural principles, material testing and evaluation, project management, computer-assisted design, 3D animation, sustainability, and graphic communication.

Program Educational Objectives (PEOs)

1. Professional Achievement: The Construction Engineering program prepares graduates to become Licensed Professional Engineers and Certified Professional Constructors.
2. Career Achievement: The Construction Engineering program prepares graduates to contribute to society by working in an occupation related to the architecture-engineering-construction industry.

Under the stimulus of increasing demand for global services, many Nebraska companies have expanded their reach well beyond U.S. borders. This demand gives the construction engineering graduate an unprecedented number of opportunities for employment—locally, nationally and internationally—and for pursuing an advanced degree at the University of Nebraska—Lincoln or elsewhere.

Construction engineers participate in the preparation of engineering and architectural documents, including specifications, which they translate into finished projects such as buildings for housing, commerce and industry, highways, railroads, waterways, airports, power plants, energy distribution systems, military bases and space center complexes. These projects involve thousands of details shared by a team of owners, architects, engineers, general constructors, specialty constructors, manufacturers, material suppliers, equipment distributors, regulatory bodies and agencies, labor resources and others. The constructor assumes responsibility for delivery of the completed project at a specified time and cost and also accepts associated legal, financial and management obligations. Because of the broad scope of the construction engineer's project responsibility, they must ensure the project's constructability as well as its capability to be operated and maintained.

Construction engineering students are required to enroll in a set of courses specifically designed for general construction education. Each student selects, with the guidance of an advisor, a set of approved electives. The program outlined below leads to a bachelor of science degree in construction engineering.

Professional Admission Requirements

In order to be professionally admitted into the construction engineering program, students must complete at least 43 credit hours of courses

listed in the first two years of the required curriculum with a minimum GPA of 2.5 for those major courses (not necessarily the cumulative GPA).

College Requirements

College Admission

College Entrance Requirements

Students must meet both the University and College of Engineering entrance requirements. The following includes both the University and College of Engineering entrance requirements.

Students must have high school credit for (one unit is equal to one high school year):

1. Mathematics – 4 units: 2 of algebra, 1 of geometry, and 1 of precalculus and trigonometry
2. English – 4 units
3. Natural sciences – 3 units that must include 1 unit of physics and 1 unit of chemistry (chemistry requirement waived for students in construction management or computer science)
4. Foreign language – 2 units of a single foreign language
5. Social studies – 3 units
6. Students having a composite ACT score of 28 or greater (or equivalent SAT score) will be admitted to the College of Engineering even if they lack any one of the following: trigonometry, chemistry, or physics. Students without test scores who are missing a full unit of trigonometry/pre-calculus/calculus or chemistry or physics will be evaluated through College Review.
7. Students having an ACT score of 19 or less in English (or equivalent SAT score) or a grade lower than B in high school English, must take ENGL 150 Writing and Inquiry or ENGL 151 Writing for Change.

A total of 16 units is required for admission.

Engineering requires that student performance meet one of the following standards: composite ACT of 24, SAT of 1180, ACT Math subscore of 24, SAT Math subscore of 580, or a 3.5 cumulative GPA.

Any domestic first-year student who does not gain admission to Engineering but does gain admission to the University of Nebraska-Lincoln (UNL) will be reviewed through College Review. College Review is conducted through the College Review Committee which considers factors beyond standardized testing. Any first-year student who is not admitted through college review is placed in Pre-Engineering (PENG) with the Exploratory and Pre-Professional Advising Center (Explore Center). Students in the Explore Center can transfer to the College of Engineering once college admission requirements are met.

Students for whom English is not their language of nurture must meet the minimum English proficiency requirements of the University.

Students who lack entrance units may complete precollege training by Independent Study through the University of Nebraska—Lincoln Office of On-line and Distance Education, in summer courses, or as a part of their first or second semester course loads while in the Explore Center or other colleges at UNL.

Students should consult their advisor, their department chair, or Engineering Student Services (ESS) if they have questions on current policies.

Other Admission Requirements

Students who transfer to the University of Nebraska–Lincoln from other accredited colleges or universities and wish to be admitted to the College of Engineering (COE) must meet COE first-year student entrance requirements, have a minimum cumulative GPA of 2.5, and be calculus-ready. Students not meeting either of these requirements must enroll in the Explore Center or another University college until they meet COE admission requirements. Students transferring from UNO, UNL, or UNK to the College of Engineering must be in good academic standing with their institution.

The COE accepts courses for transfer for which a C or better grade was received from colleges outside of the NU system. Although the University of Nebraska–Lincoln and the College of Engineering in general accepts C- and D grades from the University of Nebraska Kearney and the University of Nebraska Omaha, not all majors in the COE accept such low grades. Students must conform to the requirements of their intended major and, in any case, are strongly encouraged to repeat courses with a grade of C- or less.

Students who were previously admitted to COE and are returning to the College of Engineering must demonstrate a cumulative GPA of 2.5 to be readmitted to COE.

College Degree Requirements

Grade Rules

Grade Appeals

In the event of a dispute involving any college policies or grades, the student should appeal to their instructor, and appropriate department chair or school director (in that order). If a satisfactory solution is not achieved, the student may appeal their case through the College Academic Appeals Subcommittee.

Catalog Rule

Students must fulfill the requirements stated in the catalog for the academic year in which they are first admitted at the University of Nebraska–Lincoln. In consultation with advisors, a student may choose to follow a subsequent catalog for any academic year in which they are admitted to and enrolled as a degree-seeking student at Nebraska in the College of Engineering. Students must complete all degree requirements from a single catalog year. The catalog which a student follows for degree requirements may not be more than 10 years old at the time of graduation.

Students who have transferred from a community college may be eligible to fulfill the requirements as stated in the catalog for an academic year in which they were enrolled at the community college prior to attending the University of Nebraska–Lincoln. This decision should be made in consultation with the student's College of Engineering academic advising team (e.g., ESS professional advisor and the chief faculty advisor for the student's declared degree program). The chief faculty advisor has the final authority for this decision. Eligibility is based on a) enrollment in a community college during the catalog year the student wishes to utilize, b) maintaining continuous enrollment of at least 12 credit hours per semester at the previous institution for at least 2 semesters, and c) continuous enrollment at the University of Nebraska–Lincoln within 1 calendar year from the student's last term at the previous institution. Students must complete all degree requirements from a single catalog year and within the timeframe allowable for that catalog year.

Learning Outcomes

Graduates of the construction engineering program will have:

1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
3. An ability to communicate effectively with a range of audiences.
4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

The Construction Engineering (BS) program is accredited by the Engineering Accreditation Commission of ABET, <https://www.abet.org>, under the commission's General Criteria and Program Criteria for Construction and Similarly Named Engineering Programs.

Major Requirements

Requirements for the Degree (Lincoln Campus)

First Semester

CHEM 109A & CHEM 109L	General Chemistry I and General Chemistry I Laboratory (ACE 4)	4
or CHEM 113A & CHEM 113L	Fundamental Chemistry I and Fundamental Chemistry I Laboratory	
ENGR 100	Interpersonal Skills for Engineering Leaders (ACE 2)	3
CONE 103	Introduction to Construction Engineering	1
CSCE 101	Fundamentals of Computer Science	3
MATH 106	Calculus I (ACE 3)	5
ENGR 10	Freshman Engineering Seminar ¹	0
or ENGR 30	Transfer Student Engineering Seminar	
Credit Hours Subtotal:		16

Second Semester

CNST 112	Construction Communications	3
MATH 107	Calculus II	4
PHYS 211	General Physics I	4
PHYS 221	General Physics Laboratory I	1
ACE Elective		
Choose one course from not yet satisfied ACE outcomes 5, 7, or 9		3
Credit Hours Subtotal:		15

Third Semester

CONE 221	Geometric Control Systems	3
BSEN 206	Engineering Economics	3
MATH 208	Calculus III	4
MECH 223	Engineering Statics	3
PHYS 212	General Physics II	4
ENGR 20	Sophomore Engineering Seminar ²	0
Credit Hours Subtotal:		17

Fourth Semester

CNST 225	Introduction to Building Information Modeling (BIM)	3
JGEN 200 / ENGR 220	Technical Communication I	3
MATH 221	Differential Equations	3
MECH 325	Mechanics of Elastic Bodies	3
MECH 373	Engineering Dynamics	3
Credit Hours Subtotal:		15

Fifth Semester

ECEN 211	Elements of Electrical Engineering I	3
CIVE 341	Structural Analysis Fundamentals	3
CIVE 342	Structural Design Fundamentals	1
CNST 241	Horizontal Construction	3
CONE 378 / CNST 378	Construction Estimating I	3
CIVE 310	Fluid Mechanics	3
or MECH 310	Fluid Mechanics	
Credit Hours Subtotal:		16

Sixth Semester

CIVE 331	Introduction to Geotechnical Engineering	4
CIVE 371	Materials of Construction	3
ECON 212	Principles of Microeconomics (ACE 6)	3
or ECON 200	Economic Essentials and Issues	
STAT 380	Statistics and Applications	3
or MECH 321	Engineering Statistics and Data Analysis	

ACE Elective

Choose one course from not yet satisfied ACE outcomes 5, 7, or 9	3
Credit Hours Subtotal:	16

Seventh Semester

CNST 420	Professional Practice and Ethics	3
CIVE 440	Reinforced Concrete Design I	3
CNST 444	Construction Site Safety Management	3
CONE 476 / CNST 476	Project Budgets and Controls	3
CONE 485 / CNST 485	Construction Planning, Scheduling, and Controls	3
Credit Hours Subtotal:		15

Eighth Semester

CIVE 441	Steel Design I	3
CONE 489	Construction Engineering Capstone Course (ACE 10)	3

Technical Elective	3
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Design Elective	3
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ACE Elective

Choose one course from not yet satisfied ACE outcomes 5, 7, or 9	3
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Credit Hours Subtotal:	15
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Total Credit Hours	125
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¹ ENGR 193 may apply for ENGR 10 (students must be in the Kiewit Scholars Program to take the course).

² ENGR 493 may apply for ENGR 20 (students must be in the Kiewit Scholars Program to take the course).

Additional Major Requirements

Grade Rules

C- and D Grades

All coursework (including ACE courses and electives) must be of C grade level or higher to be credited toward graduation requirements or to be valid as a prerequisite for another course.

GPA Requirements

A minimum GPA of 2.5 is required for professional admission.

Electives

Students are required to enroll in a predetermined set of courses specifically designed for general construction education. Each student selects, with the approval of his/her advisor, a set of approved electives.

Technical electives are selected from the following list. One (3 credit hour) of the required two electives needs to be considered a design technical elective.

Design Electives

CIVE 443	Advanced Structural Analysis	3
CIVE 444	Structural Design and Planning	3
CIVE 446	Steel Design II	3
CIVE 447	Reinforced Concrete Design II	3
CONE 417	Formwork Systems	3
CONE 481	Highway and Bridge Construction	3
CONE 482	Heavy and/or Civil Construction	3
CONE 483	Support of Excavation	3

Technical Electives

*All previously listed Design Electives

CNST 305	Building Environmental Technical Systems I	3
CNST 306	Electrical Systems	3
CNST 379	Construction Estimating II	3
CNST 411	Project Administration	3
CNST 415	Mechanical/Electrical Project Management	3
CNST 425	Alternative Project Delivery Methods	3
CNST 434	The Design-Build Project Delivery System	3
CNST 436	Intent and Application of International Building Code	3
CNST 442	Healthcare Design and Construction	3
CNST 495	Internship	3

CNST 498	Special Topics in Construction Management	1-6
CONE 450	Sustainable Construction	3
CONE 466	Heavy and/or Civil Estimating	3
CNST 480	Productivity and Human Factors in Construction	3
CONE 495	Internship	3
CONE 498	Special Projects	1-6
MECH 420	Heat Transfer	3

ACE Requirements

The CONE program follows the University's ACE general education requirements. Because of the specific needs of the program, several of these courses are specified in the curriculum. Please contact DurhamSchool@unl.edu if you are interested in more information about this program.

Grade Rules

C- and D Grades

All coursework (including ACE courses and electives) must be of C grade level or higher to be credited toward graduation requirements or to be valid as a prerequisite for another course.

Pass/No Pass

No course (including ACE courses and electives) may be taken pass/no pass.

CONE 103 Introduction to Construction Engineering

Description: Introduction to the organization and terminology of construction engineering. Overview of technical and management skills required to succeed in the construction engineering profession.

Credit Hours: 1

Max credits per semester: 1

Max credits per degree: 1

Grading Option: Graded

Prerequisite for: CONE 211

CONE 206 Engineering Economics

Crosslisted with: BSEN 206

Prerequisites: Sophomore standing. Credit toward the degree may be earned in only one of BSEN 206/CONE 206 or CHME 452

Description: Introduction to methods of economic comparisons of engineering alternatives: time value of money, depreciation, taxes, concepts of accounting, activity-based costing, ethical principles, civics and stewardship, and their importance to society.

Credit Hours: 3

Max credits per semester: 3

Max credits per degree: 3

Grading Option: Graded with Option

Prerequisite for: CONE 319; MECH 446; MECH 446H

ACE: ACE 8 Civic/Ethics/Stewardship

CONE 211 Construction Business Methods

Prerequisites: CONE 103 or CNST 131 or AREN 101

Description: Business concepts and practices used by construction contractors. The construction industry, management principles, forms of business ownership, company organization, construction contracts, estimating and bidding, business ethics, bonds and insurance, financial statements, cost accounting, equipment management, planning and scheduling, labor relations and personnel management.

Credit Hours: 3

Max credits per semester: 3

Max credits per degree: 3

Grading Option: Graded

CONE 221 Geometric Control Systems

Prerequisites: MATH 104 or MATH 106

Description: Surveying fundamentals and theory related to construction, including building layout, measurement procedures, vertical control, and surveying instrument operation. Measurement of distance, direction, elevation, and location using mechanical and electronic systems.

Explain the concepts of surveying and project layout as they apply to construction. Demonstrate the use of various surveying instruments, equipment, technologies, and control on construction project examples.

Credit Hours: 3

Max credits per semester: 3

Max credits per degree: 3

Grading Option: Graded

Course and Laboratory Fee: \$15

CONE 319 Construction Methods and Equipment

Prerequisites: CONE 206

Description: Characteristics, capabilities, and selection of equipment and methods used in the building construction industry. Estimating job production, equipment production rates, machine operating costs, earth-moving equipment, hoisting equipment, operations analysis, and use of various other construction and methods and equipment.

Credit Hours: 3

Max credits per semester: 3

Max credits per degree: 3

Grading Option: Graded with Option

CONE 378 Construction Estimating I

Crosslisted with: CNST 378

Prerequisites: CNST 112

Description: Preparation of detailed cost estimates based on contract documents. Identify and analyze cost components of building and site scopes of work to perform detailed quantity take-offs. Apply labor, material, and equipment pricing from RS Means. Use production rates and quantity takeoffs to prepare a preliminary construction schedule. Complete quantity takeoffs from 2D plans and from 3D BIM software models.

Credit Hours: 3

Max credits per semester: 3

Max credits per degree: 3

Grading Option: Graded

Prerequisite for: CNST 379; CNST 440

CONE 416 Wood and / or Contemporary Materials Design

Crosslisted with: CONE 816

Prerequisites: CIVE 341

Description: Design of structural timber, beams, columns, and connections. Introduction to applicable design philosophies and codes. Overview of materials design. Masonry, aluminum, and contemporary materials such as plastics and fiber reinforced systems and composite material groups. Design considerations, cost and constructability analysis.

Credit Hours: 3

Max credits per semester: 3

Max credits per degree: 3

Grading Option: Graded

CONE 417 Formwork Systems

Crosslisted with: CONE 817

Prerequisites: CIVE 341; parallel CIVE 441

Description: Design of different types of formwork for concrete: wall forms, slab forms, beam forms, and column forms; shoring and reshoring for multistory structures and elevated formwork; and custom and manufactured forming system, plate and shell forms, slipforms, and flying forms.

Credit Hours: 3

Max credits per semester: 3

Max credits per degree: 3

Grading Option: Graded with Option

Offered: SPRING

CONE 450 Sustainable Construction

Crosslisted with: CONE 850

Prerequisites: Senior standing.

Description: Sustainable construction and its application to the green building industry. LEED certification process, sustainable building site management, efficient waste water applications, optimizing energy performance, indoor environmental issues, performance measurement and/or verification, recycled content and certified renewable materials.

Credit Hours: 3

Max credits per semester: 3

Max credits per degree: 3

Grading Option: Graded

CONE 459 BIM I: Introduction to Building Information Modeling (BIM)

Crosslisted with: CONE 859

Prerequisites: CNST 112 Construction, or Graduate standing in AREN, CIVE, CNST, or CONE.

Description: This course instructs CAD users on the effective use of Building Information Model (BIM) for Integration of design, document and Construction Estimate. Topics include: model-based 3D design, file formats, interoperability, and MEP modeling.

Credit Hours: 3

Max credits per semester: 3

Max credits per degree: 3

Grading Option: Graded with Option

CONE 466 Heavy and/or Civil Estimating

Crosslisted with: CONE 866

Prerequisites: CONE 319, CONE 378, and CONE 485.

Description: Estimating techniques and strategies for heavy and/or civil construction. Unit pricing, head and civil constructions takeoffs and estimating, equipment analysis, overhead cost and allocations, estimating software and government contracts.

Credit Hours: 3

Max credits per semester: 3

Max credits per degree: 3

Grading Option: Graded

CONE 476 Project Budgets and Controls

Crosslisted with: CNST 476, CONE 876

Prerequisites: CNST 378, and BSEN 206 or FINA 300

Description: The basic systems related to revenues and expenses associated with record keeping of construction contracts. Managerial accounting related to planning and control of construction projects.

Credit Hours: 3

Max credits per semester: 3

Max credits per degree: 3

Grading Option: Graded

Prerequisite for: CONE 489

CONE 481 Highway and Bridge Construction

Crosslisted with: CONE 881

Prerequisites: Senior standing; CNST 241.

Description: The methods and equipment required in the construction of roads and bridges. Methods and equipment necessary for roads and bridges. Substructure and superstructures, precast and cast-in-place segments, and standard and specialized equipment.

Credit Hours: 3

Max credits per semester: 3

Max credits per degree: 3

Grading Option: Graded

CONE 482 Heavy and/or Civil Construction

Crosslisted with: CNST 482, CNST 882, CONE 882

Prerequisites: CNST 379

Notes: Not open to non-degree graduate students

Description: History, theory, methods, and management principles of planning and executing heavy and/or civil projects. Emerging and new equipment capabilities. Economical use of equipment and management of costs associated with production.

Credit Hours: 3

Max credits per semester: 3

Max credits per degree: 3

Grading Option: Graded

CONE 483 Support of Excavation

Crosslisted with: CONE 883

Prerequisites: Senior standing.

Description: The design and placement of excavation supports according to OSHA requirements and industry standards. A variety of routine to moderately complex support systems. Open excavations, sheet piling and cofferdams, soil mechanics, lateral loads, hydrology, and pumping methods.

Credit Hours: 3

Max credits per semester: 3

Max credits per degree: 3

Grading Option: Graded

CONE 485 Construction Planning, Scheduling, and Controls**Crosslisted with:** CNST 485, CNST 885, CONE 885**Prerequisites:** CNST 378**Notes:** Not open to non-degree graduate students**Description:** Planning and scheduling a project using the critical path methods (CPM) with computer applications. Project pre-planning, logic networks, precedence diagrams, time estimates, critical path, float time, crash programs, scheduling, short interval schedules, pull planning, and monitoring project activities.**Credit Hours:** 3**Max credits per semester:** 3**Max credits per degree:** 3**Grading Option:** Graded**Prerequisite for:** CNST 489; CONE 489**CONE 489 Construction Engineering Capstone Course****Prerequisites:** CONE 485 and CONE 476**Notes:** To be taken in the term preceding graduation. Embodies the cumulative CONE experience in a project format and uses teams to simulate actual construction enterprises operating in cooperative and competitive situations which replicate the construction industry.**Description:** An integrated, comprehensive project.**Credit Hours:** 3**Max credits per semester:** 3**Max credits per degree:** 3**Grading Option:** Graded**ACE:** ACE 10 Integrated Product**CONE 495 Internship****Crosslisted with:** CNST 495**Prerequisites:** Permission of instructor, Letter of application, Letter of agreement from industry mentor**Notes:** Not open to non-degree graduate students**Description:** Participation in a full-time summer internship associated with a construction-related entity. Includes weekly assignments and a final presentation designed to foster interactions between the intern and the business side of the entity. General topics include personnel and time management, structuring business plans, scheduling work, finance and budgets, marketing plans, contracts, risk analysis, and communication and leadership.**Credit Hours:** 3**Max credits per semester:** 3**Max credits per degree:** 3**Grading Option:** Graded**Offered:** SUMMER**Experiential Learning:** Fieldwork**CONE 498 Special Projects****Prerequisites:** Permission.**Description:** Individual research on a selected technical, structural, materials or management problem in construction.**Credit Hours:** 1-6**Min credits per semester:** 1**Max credits per semester:** 6**Max credits per degree:** 6**Grading Option:** Graded

Career Information

The following represents a sample of the internships, jobs and graduate school programs that current students and recent graduates have reported.

Jobs of Recent Graduates

- Construction Engineer, Olsson Associates - Omaha, NE
- Project Engineer, JE Dunn Construction - Denver, CO
- Assistant Project Manager, Adolfson & Peterson Construction - Aurora, CO
- Project Engineer, Team Industrial - Omaha, NE
- Project Engineer, Darland Construction - Omaha, NE
- Superintendent Apprentice, Eriksen Construction - Blair, NE
- Field Engineer, Mortenson Construction - Minneapolis, MN
- Project Engineer, DPR Construction - Sacramento, CA
- Engineer, Kiewit Building Group - Omaha, NE
- Project Engineer, The Waldinger Corporation - Omaha, NE
- Project Engineer, Howard S. Wright - Portland, OR
- Special Inspections Technician, Olsson Associates - Omaha, NE
- Superintendent-in-Training, J.E. Dunn Construction Company - Omaha, NE
- Estimator, Sampson Construction - Lincoln, NE

Internships

- Field Technician, Thiele Geotech - Omaha, NE
- Intern, The Whiting-Turner Contracting Company - Boston, MA
- Project Management Intern, Cheever Construction Company - Lincoln, NE
- Intern, The Department of Design and Construction - New York, NY
- Field Engineer, Kiewit - Phoenix, AZ
- Project Engineer, DPR Construction - Omaha, NE
- Estimating Intern, Haselden Construction - Denver, CO
- Project Intern, Lueder Construction - Omaha, NE
- Construction Engineering Intern, Kiewit Building Group - Austin, TX
- Controller, Kiewit Building Group - Omaha, NE
- Intern, The Whiting-Turner Contracting Company - Council Bluffs, IA
- Field Engineer Intern, Kiewit Southwest - Phoenix, AZ
- Intern, Thomas David Builders - Omaha, NE
- Field Inspector Intern, Alfred Benesch & Company - Lincoln, NE
- Construction Engineering Co-op, Breckenridge Homeowners Assoc - Breckenridge, CO
- Field Engineer, Kiewit - Corpus Christi, TX
- Field Engineer, Kiewit Southwest District - Phoenix, AZ
- Office Engineer Intern, Kiewit Building Group - Omaha, NE
- Intern, Dream Home Drafting - Omaha, NE
- Intern, Olsson Associates - La Vista, NE
- Estimating Intern, Kiewit Engineering Company - Omaha, NE
- Intern, Lamp Rynearson Associates - Omaha, NE
- Project Controls Intern, Kiewit Building Group - Omaha, NE
- Intern, Olsson Associates - La Vista, NE
- Construction Engineering Co-op, Alfred Benesch and Company - Omaha, NE