The specialized fields within the Civil Engineering Technology Program include the two concentrations: Structures and Construction. The curriculum combines theory and applications in the Civil Engineering areas. The CET graduates apply engineering principles in performing many of the tasks necessary for the planning, designing and construction of highways, buildings, railroads, bridges, reservoirs, dams, irrigation works, water systems, airports and other structures. They participate in estimating costs, preparing material specifications. During the construction phase they work closely with the contractor and the superintendent in scheduling field layout, construction activities, and the inspection of the work for conformity to specifications. In recent years, a major work area has involved environmental problems.

### What Courses Will I Take?

<table>
<thead>
<tr>
<th>Engineering Science</th>
<th>Analysis and Design</th>
<th>Communication Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Engineering Graphics</td>
<td>- Concrete Design</td>
<td>- English Composition</td>
</tr>
<tr>
<td>- Building Structures</td>
<td>- Steel Design</td>
<td>- Effective Speaking</td>
</tr>
<tr>
<td>- Statics</td>
<td>- Timber Design</td>
<td>- Technical Writing</td>
</tr>
<tr>
<td>- Dynamics</td>
<td>- Computer Programming</td>
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<tr>
<td>- Mechanics of Materials</td>
<td>- Structural Analysis</td>
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<tr>
<td>- Fluid Mechanics</td>
<td></td>
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<tr>
<td>- Thermodynamics</td>
<td></td>
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<tr>
<td>- Structural Design</td>
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<tr>
<td>Natural Science</td>
<td>Mathematics</td>
<td>General Studies</td>
</tr>
<tr>
<td>- Chemistry</td>
<td>- Calculus</td>
<td>- Liberal Arts</td>
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<tr>
<td>- Physics</td>
<td></td>
<td>- History</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Social Studies</td>
</tr>
</tbody>
</table>

**Analysis and Design**
- Concrete Design
- Steel Design
- Timber Design
- Computer Programming
- Structural Analysis

**Mathematics**
- Calculus

**Communication Skills**
- English Composition
- Effective Speaking
- Technical Writing

**General Studies**
- Liberal Arts
- History
- Social Studies

**Technical Electives**

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**Faculty** – The top priority for faculty in the CET program is teaching and advising. With many years of industrial experience, they bring their expertise, relevancy and currency to the classrooms. All current Full-Time Faculty members hold a Ph.D. degree.

**Students** – Faculty provide each student with individualized counseling, and advising in meeting graduation requirements. Many Civil Engineering Technology students are working part-time or full-time. The program offers several evening courses to accommodate the working student. The CET program’s collaboration with the Internship Center of the college offers possibilities for students to gain industrial experience and earn technical elective credits at the same time. Civil Engineering Technology students are active in the American Society of Civil Engineers (ASCE). The ASCE student chapter participates in competitions organized by ASCE and American Institute of Steel Construction (AISC), invites guest speakers to their meetings, organizes field trips, hosts social functions, and provides community service. The Colorado Section of the ASCE and the Younger Member Group (YMG) is a strong supporter of the student chapter. Students involved in the ASCE chapter have a strong link to the industry in the Civil Engineering field. All students who are considering a major in civil engineering technology are expected to consult with CET faculty advisor.

**Accreditation** – The Civil Engineering Technology Bachelor of Science degree program is accredited by the Engineering Technology Accreditation Commission (ETAC) of ABET, 415 North Charles Street, Baltimore, MD 21201, Telephone: (410) 347-7700, [www.abet.org](http://www.abet.org).
The specialized fields within the Civil Engineering Technology (CET) Program include two concentrations: Structures and Construction. The curriculum combines theory and applications in the Civil Engineering areas. The CET graduates apply engineering principles in performing many of the tasks necessary for the planning, designing and construction of highways, buildings, railroads, bridges, reservoirs, dams, irrigation works, water systems, airports and other structures. They participate in estimating costs and preparing material specifications. During the construction phase, they work closely with the contractor and the superintendent in scheduling field layout, construction activities, and the inspection of the work for conformity to specifications.

**General Studies Requirements – 38 hours**

**Written Communication (6 credits)**
- ENG 1010 - Composing Arguments **Credits:** 3
- ENG 1020 - Freshman Composition: Analysis, Research, and Documentation **Credits:** 3

**Oral Communication (3 credits)**
- CAS 1010 - Public Speaking **Credits:** 3

**Quantitative Literacy (4 credits)**
- MTH 1410 - Calculus I **Credits:** 4

**Arts and Humanities (6 credits)**
- PHI 1030 - Introduction to Ethics **Credits:** 3
  - or PHI 3360 - Business Ethics
- See the General Studies section of the catalog for approved courses.

**Historical (3 credits)**
- See the General Studies section of the catalog for approved courses.

**Natural and Physical Sciences (10 credits)**
- CHE 1100 - Principles of Chemistry **Credits:** 4
- CHE 1150 - Principles of Chemistry Laboratory **Credits:** 1
- PHY 2311 - General Physics I **Credits:** 4
- PHY 2321 - General Physics I Laboratory **Credits:** 1

**Social and Behavioral Sciences I (3 credits)**
- See the General Studies section of the catalog for approved courses.

**Social and Behavioral Sciences II (3 credits)**
- ECO 2020 - Principles of Microeconomics **Credits:** 3

**Global Diversity (0 or 3 credits)**
The department recommends that this requirement be met along with the Arts & Humanities, Historical, or Social & Behavioral Sciences general studies choices.

**General Studies Total: 38 credits**

**Multicultural Requirement (0 or 3 credits)**
The department recommends that this requirement be met along with the Arts & Humanities, Historical, or Social & Behavioral Sciences general studies choices.

See the Multicultural section of the catalog for approved courses.

**Required CET Core Courses**

<table>
<thead>
<tr>
<th>Required Technical Studies</th>
<th>Prerequisites</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CET 1100</td>
<td>Introduction to Civil Engineering Technology</td>
<td>(none)</td>
</tr>
<tr>
<td>OR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CET 1040</td>
<td>Introduction to Engineering</td>
<td>(none)</td>
</tr>
<tr>
<td>CET 1215</td>
<td>Engineering Graphics</td>
<td>(none)</td>
</tr>
<tr>
<td>ARCH 2003</td>
<td>Building Structures</td>
<td>CET 1215</td>
</tr>
<tr>
<td>CET 2150</td>
<td>Mechanics I: Statics</td>
<td>MTH 1410, PHY 2311, Pre/CoReq: PHY 2321</td>
</tr>
<tr>
<td>CET 3120</td>
<td>Engineering Economy</td>
<td>CET 2150, COM 2610 Pre/CoReq: MTH 2410</td>
</tr>
<tr>
<td>CET 3135</td>
<td>Mechanics of Materials with Lab</td>
<td>CET 2150, COM 2610 Pre/CoReq: MTH 2410</td>
</tr>
<tr>
<td>CET 3170</td>
<td>Intro to Structural Analysis</td>
<td>CET 3135</td>
</tr>
<tr>
<td>CET 3185</td>
<td>Fluid Mechanics I for CET</td>
<td>MET 3160</td>
</tr>
<tr>
<td>CET 3190</td>
<td>Fluid Mechanics II for CET</td>
<td>CET 3185</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Prerequisites</td>
</tr>
<tr>
<td>------------</td>
<td>--------------------------------------------------</td>
<td>----------------------------------------------------</td>
</tr>
<tr>
<td>CET 3330</td>
<td>Environmental Technology Processes</td>
<td>CHE 1100 or CHE 1800, Junior standing</td>
</tr>
<tr>
<td>CET 4100</td>
<td>Senior Project I</td>
<td>CET 3120, COM 2610, MTH 2420, CAS 1010,</td>
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<tr>
<td>CET 4110</td>
<td>Senior Project II</td>
<td>CET 4100</td>
</tr>
<tr>
<td>CET 4130</td>
<td>Soil Mechanics</td>
<td>CET 3135, CET 3185, senior standing</td>
</tr>
<tr>
<td>CET 4135</td>
<td>Foundation and Geotechnical Engineering</td>
<td>CET 4130</td>
</tr>
<tr>
<td>CET 4150</td>
<td>Highway Engineering and Surveying</td>
<td>Junior standing</td>
</tr>
<tr>
<td>CET 4570</td>
<td>Engineering Law</td>
<td>CET 3120</td>
</tr>
<tr>
<td>COM 2610</td>
<td>Intro to Technical Writing</td>
<td>ENG 1010</td>
</tr>
<tr>
<td>EET 2350</td>
<td>Advanced Technical Programming</td>
<td>MTH 1400 (or MTH 1110 and MTH 1120)</td>
</tr>
<tr>
<td>MET 3110</td>
<td>Thermodynamics</td>
<td>MTH 1410, PHY 2311</td>
</tr>
<tr>
<td>MET 3160</td>
<td>Mechanics II: Dynamics</td>
<td>CET 2150, MTH 2410</td>
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<td>MTH 2410</td>
<td>Calculus II</td>
<td>MTH 1410</td>
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<td>Calculus III</td>
<td>MTH 2410</td>
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<tr>
<td>PHY 2331</td>
<td>General Physics II</td>
<td>MTH 2410, PHY 2311, (ENG 1010 or CAS 1010)</td>
</tr>
<tr>
<td>PHY 2341</td>
<td>General Physics II Lab</td>
<td>concurrent with PHY 2331, MTH 1120 (ENG 1010 or CAS 1010)</td>
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</table>

**Construction Concentration – 18 hours**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prerequisites</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CET 3100</td>
<td>Construction Methods</td>
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<td>3</td>
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<tr>
<td>CET 3110</td>
<td>Construction Estimating</td>
<td>CET 3100</td>
<td>3</td>
</tr>
<tr>
<td>CET 4120</td>
<td>Concrete Design I</td>
<td>CET 3135, <strong>Pre/CoReq:</strong> CET 3170</td>
<td>3</td>
</tr>
<tr>
<td>CET 4400</td>
<td>Steel Design I</td>
<td>CET 3135, <strong>Pre/CoReq:</strong> CET 3170</td>
<td>3</td>
</tr>
<tr>
<td>CET 4450</td>
<td>Timber Design</td>
<td>CET 3135, <strong>Pre/CoReq:</strong> CET 3170</td>
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<tr>
<td></td>
<td>Approved technical elective (consult a CET advisor)</td>
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</table>

**Structures Concentration – 18 hours**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prerequisites</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CET 4120</td>
<td>Concrete Design I</td>
<td>CET 3135, <strong>Pre/CoReq:</strong> CET 3170</td>
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<tr>
<td>CET 4140</td>
<td>Concrete Design II</td>
<td>CET 4120</td>
<td>3</td>
</tr>
<tr>
<td>CET 4400</td>
<td>Steel Design I</td>
<td>CET 3135, <strong>Pre/CoReq:</strong> CET 3170</td>
<td>3</td>
</tr>
<tr>
<td>CET 4410</td>
<td>Steel Design II</td>
<td>CET 4400</td>
<td>3</td>
</tr>
<tr>
<td>CET 4450</td>
<td>Timber Design</td>
<td>CET 3135, <strong>Pre/CoReq:</strong> CET 3170</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Approved technical elective (consult a CET advisor)</td>
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</table>

**CET Program Total: 128 credits**

**General Studies**: 38 credits

**Required CET Core**: 72 credits

**CET Concentration Area**: 18 credits

**Recommended Optional Minors for CET Majors**

The minor cannot be used to replace the concentration.

**Architecture Minor – 18 hours**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prerequisites</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARCH 2001</td>
<td>Introduction to Architecture</td>
<td>CET 1215</td>
<td>3</td>
</tr>
<tr>
<td>ARCH 2002</td>
<td>Architectural Design – Studio 1</td>
<td>CET 1215</td>
<td>3</td>
</tr>
<tr>
<td>ARCH 2003</td>
<td>Building Structures</td>
<td>CET 1215 or IND 1450 or MET 1200</td>
<td>3</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credit Hours</td>
<td></td>
</tr>
<tr>
<td>-------------</td>
<td>--------------------------------------------------</td>
<td>--------------</td>
<td></td>
</tr>
<tr>
<td>ARCH 3001</td>
<td>Architectural Interior Design</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ARCH 3002</td>
<td>Architectural Design – Studio 2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ARCH 3003</td>
<td>Digital Presentations in Architecture</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CET 1215</td>
<td></td>
<td></td>
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</table>

**Mathematics Minor – 23 hours**

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
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<tbody>
<tr>
<td>MTH 1410</td>
<td>Calculus I</td>
<td>4</td>
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<tr>
<td>MTH 2410</td>
<td>Calculus II</td>
<td>4</td>
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<tr>
<td>MTH 2420</td>
<td>Calculus III</td>
<td>4</td>
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<tr>
<td>MTH 3130</td>
<td>Adv Matrix Methods for the Physical Sciences</td>
<td>4</td>
</tr>
<tr>
<td>MTH 3420</td>
<td>Differential Equations</td>
<td>4</td>
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<tr>
<td>MTH 3210</td>
<td>Probability and Statistics</td>
<td>4</td>
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<tr>
<td>CS 1050</td>
<td>Computer Science I</td>
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<tr>
<td>CSS 1247</td>
<td>Intro to Programming: Visual Basics**</td>
<td>4</td>
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*One of the following*

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
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<tbody>
<tr>
<td>MTH 2410</td>
<td></td>
<td></td>
</tr>
<tr>
<td>permission of Math Dept</td>
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</table>

Metropolitan State University of Denver
ARCH 2001 – Introduction to Architecture
Credits: 3 (2 + 2)
Prerequisite(s): CET 1215 with a grade of “C” or better
Description: In this course, students will recognize the complexity and beauty of architecture, and develop a specialized area of interest within the field of architecture. The course provides a foundation in the culture of architecture, which students will pursue through affiliated courses on the subject.

ARCH 2002 – Architectural Design – Studio 1
Credits: 3 (2 + 2)
Prerequisite(s): CET 1215 with a grade of “C” or better
Description: In this course, students will focus on a practical, residential building design. The small-scale dwelling design will include the overall process from creating a basic building concept to its finished plan and documentation.

ARCH 2003 – Building Structures
Credits: 3 (2 + 2)
Prerequisite(s): CET 1215 with a grade of “C” or better
Description: This course will be the on importance of collaboration between related fields in the building industry, development of the architectural and building structural knowledge of students and encouraging creative design integration through class projects.

ARCH 3001 – Architectural Interior Design
Credits: 3 (2 + 2)
Prerequisite(s): ARCH 2002 with a grade of “C” or better
Description: This course introduces students to traditional and contemporary presentation techniques that could be applied to the professional field to the architecture profession. The goal of the course is to enable students to self-manage their professional life, and creatively use different media platforms.

ARCH 3002 – Architectural Design – Studio 2
Credits: 3 (2 + 2)
Prerequisite(s): ARCH 2002 with a grade of “C” or better
Description: This course is a cross section of topics in contemporary civil engineering and its relation to current national, social, industrial, ethical, and international issues and problems will be discussed.

CET 1100 – Introduction to Civil Engineering Technology
Credits: 3 (3 + 0)
Description: This course is a cross section of topics in contemporary civil engineering disciplines, with emphasis on the tools of engineering problem solving. Students are taught to work in teams and introduced to the design process and to several tools necessary in a civil engineering career. In this course they develop an appreciation of professional topics to include: ethics, respecting others, and professional societies.

CET 1215 – Engineering Graphics
Credits: 3 (2 + 2)
Description: Students will be introduced to CAD software to perform geometric constructions, multi-view projections, section views, dimensioning, and solid modeling.

CET 2100 – Structural Drawing
Credits: 3 (1 + 4)
Prerequisite(s): CET 1215 with a grade of “C” or better, or Permission of instructor
Description: This course introduces drawings of structural members and connections, including engineering layouts and detail drawings.

CET 3100 – Construction Methods
Credits: 3 (3 + 0)
Prerequisite(s): CET 3100; or permission of instructor
Description: This course provides a knowledge base in the theory and practice of architecture and urban design, focusing on complex architectural issues. Students will explore the relationship of public building design and urbanism. Students will gain insight into the connections between architectural projects and urban design, and overview urban planning history from its beginnings to the present. Students learn to create large-scale, urban-development projects through case studies that demonstrate design precedents, to procedure, to implementation.

CET 3105 – Mechanics of Materials with Laboratory
Credits: 4 (3 + 2)
Prerequisite(s): CET 2150 and COM 2610 with grades of “C” or better; or permission of instructor
Corequisite(s): MTH 2410
Description: This course examines the “time value of money” as a basis for evaluating activities, and the environment around us. Over the course of the semester, they will explore anthropogenic and natural effects on air and water quality, how these systems operate and the application of applied sciences (e.g., physics, chemistry, and biology) to the natural world.

CET 3120 – Engineering Economy
Credits: 3 (3 + 0)
Prerequisite(s): CET 3100; or permission of instructor
Description: This course is a continuation of CET 3100, Construction Methods. It provides a basic understanding of the methods used to prepare a building and/or bridge construction cost estimate. The students learn to do quantity takeoff utilizing plans and specifications.

CET 3125 – Fluid Mechanics I for Civil Engineering Technology
Credits: 3 (3 + 0)
Prerequisite(s): CET 3185 with a grade of “C” or better
Description: This course covers and studies the engineering applications of physical properties of ideal fluids, real fluids, hydrostatics, kinematics, energy considerations, momentum principle, dimensional analysis, and incompressible flow in pipes and ducts.

CET 3190 – Fluid Mechanics II for Civil Engineering Technology
Credits: 3 (3 + 0)
Prerequisite(s): CET 3185 with a grade of “C” or better
Description: This course examines fluid mechanics applied to physical properties of liquids and gases, including the dynamics of liquids and gases, the laws of conservation of mass and momentum, and the behavior of compressible fluids.

CET 3320 – Environmental Impact Statements
Credits: 3 (3 + 0)
Prerequisite(s): CET 1215 with a grade of “C” or better, or Permission of instructor
Description: This course introduces the principles of physical analysis to statically and indeterminate structures.
environmental impact assessment process. Students will learn to do information research and prepare a draft environmental impact statement.

**CET 3330 – Environmental Technology Processes**  
**Credits:** 3 (3 + 0)  
**Prerequisite(s):** CHE 1100 or CHE 1800 with a grade of “C” or better, at least junior standing; or permission of instructor  
**Description:** This course covers chemistry basics, acid-base reactions, biochemical processes and reactions. Also included is an overview of water and wastewater processes following field trips in this area.

**CET 3980 – Internship in Civil Engineering Technology**  
**Credits:** 1-15 (0 + 3-45)  
**Prerequisite(s):** Major in civil engineering technology; junior or senior status; permission of instructor  
**Description:** Supervised by a faculty member within the major department, internships provide practical, hands-on experience in a professional field related to the major. Internship placements must be established prior to enrollment in this course in consultation with the Applied Learning Center. To register with the Applied Learning Center, students must meet the following qualifications:  
- Completed at least one semester at MSU Denver  
- Sophomore, junior or senior status  
- Declared major in an undergraduate program  
- 2.5 minimum cumulative GPA at MSU Denver  
- Currently enrolled and taking classes at MSU Denver

**University Requirement(s):** Senior Experience

**CET 4100 – Senior Project I**  
**Credits:** 1 (0 + 2)  
**Prerequisite(s):** CET 3120, COM 2610, MTH 2420, and SPE 1010 with grades of “C” or better; completion of General Studies requirements; and Senior standing with a minimum cumulative GPA of 2.0.  
**Prerequisite(s) or Corequisite(s):** CET 4120 and CET 4400  
**Description:** This course requires the planning and designing of a team project in consultation with faculty advisors and industry contacts.

**University Requirement(s):** Senior Experience

**CET 4110 – Senior Project II**  
**Credits:** 2 (0 + 4)  
**Prerequisite(s):** CET 4100 with a grade of “C” or better  
**Description:** In this course, the students will build, test, and demonstrate the project they started in CET 4100. Written technical reports and oral presentations on the project are required. Part of this course involves the student working with a faculty member who acts as a consultant.

**University Requirement(s):** Senior Experience

**CET 4120 – Concrete Design I**  
**Credits:** 3 (3 + 0)  
**Prerequisite(s):** CET 3135 with a grade of “C” or better, or permission of instructor  
**Prerequisite(s) or Corequisite(s):** CET 3170  
**Description:** This course is a basic introduction to the fundamental principles of reinforced concrete design according to current ACI Code. The course covers flexural analysis and design of beams and one-way slabs, serviceability, bond and development lengths, and shear and diagonal tension.

**CET 4130 – Soil Mechanics**  
**Credits:** 4 (2 + 2)  
**Prerequisite(s):** CET 3135 and CET 3185 with grades of “C” or better, and Senior standing  
**Description:** This course covers the principles of soil mechanics and fundamentals of application in geotechnical engineering. This course covers soil behaviors and mechanical properties of soil, engineering classification of soil, permeability and seepage, consolidation and settlement, shear strength, lateral earth pressures, fundamentals of retaining structures, soil bearing capacity, and slope stability. This course also provides students the opportunity to obtain “hands-on” experience with some of the laboratory tests, techniques used in geotechnical engineering data collection and analysis methods.

**University Requirement(s):** Senior Experience

**CET 4135 – Foundation and Geotechnical Engineering**  
**Credits:** 3 (3 + 0)  
**Prerequisite(s):** CET 4130 with grade of “C” or better  
**Description:** This course applies engineering mechanics and soil mechanics principles to the provision of safe designs for foundations of bridges, buildings, towers and other structures. This course covers the analysis and design of shallow foundations, spread footings, mats, deep foundations, earth retaining structures and site exploration and characterization. It is a practical design course in foundation and geotechnical engineering.

**CET 4140 – Concrete Design II**  
**Credits:** 3 (3 + 0)  
**Prerequisite(s):** CET 4120 with a grade of “C” or better, or Permission of instructor

**University Requirement(s):** Senior Experience

**Metropolitan State University of Denver**

**CET 4150 – Highway Engineering and Surveying**  
**Credits:** 3 (3 + 0)  
**Prerequisite(s):** At least junior standing; or permission of instructor  
**Description:** This course is a specialized course in requirements, functional characteristics, and system characteristics of highway design, incorporating surveying essentials for the civil engineering field. The course develops design methods, procedures, and analysis for pavement design, roadway alignment, and user information for freeways, city arterials, and rural roadways.

**CET 4200 – Experimental Methods in Structural Engineering**  
**Credits:** 3-6 (0 + 6-12)  
**Prerequisite(s):** CET 3135  
**Description:** In this course, students will be dealing with the aspects of static and dynamic testing methods of structures made of steel, concrete, or timber. Students will be introduced to test planning, specimen design and building, loading systems and instrumentation, data acquisition and processing. They will be involved in laboratory applications and hybrid techniques, illustrative physical and numerical simulations.

**CET 4400 – Steel Design I**  
**Credits:** 3 (3 + 0)  
**Prerequisite(s):** CET 3135 with a grade of “C” or better, or permission of instructor  
**Prerequisite(s) or Corequisite(s):** CET 3170  
**Description:** This course focuses on the analysis and design of structural steel members, based on the latest edition of AISC design requirements and specifications for structural steel.

**CET 4410 – Steel Design II**  
**Credits:** 3 (3 + 0)  
**Prerequisite(s):** CET 4400 with a grade of “C” or better, or permission of instructor.  
**Description:** This course is a continuation of the fundamentals introduced in Steel Design I, with emphasis on the analysis and design of structural steel connections, based on the latest AISC design requirements and specifications for structural steel.

**CET 4450 – Timber Design**  
**Credits:** 3 (3 + 0)  
**Prerequisite(s):** CET 3135 with a grade of “C” or better, or permission of instructor  
**Prerequisite(s) or Corequisite(s):** CET 3170  
**Description:** This course focuses on the analysis and design of wood structures based on the latest edition of the National Design Specifications for Wood Construction and Supplement.

**CET 4570 – Engineering Law**  
**Credits:** 3 (3 + 0)  
**Prerequisite(s):** CET 3120 or Permission of instructor  
**Description:** This course provides the student with a basic understanding of contract laws and regulations, laws that govern the execution of the work being performed under the contract, laws that relate to the settling of differences and disputes, and licensing laws.

**Campus Box 29, Bldg. Aerospace and Engineering Sciences Suite 300, P.O. Box 173362, Denver, CO 80217-3362**  
**Phone:** (303) 615-0499, https://www.msudenver.edu/cet
Preparatory Courses
High School

Prep Math
(Choose 1 path)

MTH 1400
Pre-Calculus

MTH 1120
College Trig

MTH 1110
College Algebra

Recommended course rotation:

Freshman Year

1st Semester (Fall)
16 hours

CET 1100 Intro to Civil Engineering Technology

ENG 1010 Composing Arguments

SPE 1010 Public Speaking

2nd Semester (Spring)
18 hours

MTH 1410 Calculus I

MTH 2410 Calculus II

PHY 2311 General Physics I

PHY 2321 General Physics I-Lab

Sophomore Year

3rd Semester (Fall)
15 hours

CET 2150 Mechanics I: Statics

ARCH 2003 Building Structures

ECO 2020 Principles of Microeconomics

PHY 2331 General Physics II

PHY 2341 General Physics II Lab

4th Semester (Spring)
15 hours

COM 2610 Intro to Technical Writing

MET 3160 Mechanics II: Dynamics

CET 3135 Mechanics of Materials w/ Lab

MTH 2420 Calculus III

CHEM 1100 Principles of Chemistry

CHEM 1150 Principles of Chemistry Lab