BS in Construction and Facilities Management: Construction Management (396521) MAP Sheet
Engineering, Civil and Environmental Engineering
For students entering the degree program during the 2022-2023 curricular year.
The Construction Management program is four years in length, leading to a Bachelor of Science degree. It is designed to give graduates abilities in construction management by providing a broad background in construction technology, business, architecture, and engineering, with specific emphasis on management within the construction industry. Graduates fill middle-management positions such as superintendents, estimators, schedulers, field engineers, inspectors, general contractors, project engineers, sales representatives, and construction insurance or bonding personnel. Many go on to graduate studies in architecture, law, or business administration.

University Core and Graduation Requirements
University Core Requirements:

<table>
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<tr>
<th>Requirements</th>
<th>#Classes</th>
<th>Hours</th>
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<td>Core Enrichment: Electives</td>
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FOR UNIVERSITY CORE QUESTIONS AND FOR PROGRAM QUESTIONS SEE DEPARTMENT ADVISOR IN 430 EB

*THESE CLASSES FILL BOTH UNIVERSITY CORE AND PROGRAM REQUIREMENTS (19 hours overlap)

Graduation Requirements:
Minimum residence hours required: 30.0
Minimum hours needed to graduate: 120.0
Suggested Sequence of Courses
Freshman Year
1st Semester
CCE 1011.0
CFM 1053.0
American Heritage 3.0
PHSCS 1213.0
MATH 1124.0
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<td>7th Semester</td>
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<td>CFM 4910.5</td>
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CFM 4113.0
CFM 4123.0
CFM 4853.0
Civilization 13.0
Religion Elective 2.0
Total Hours 14.5

8th Semester
CFM 291R 0.5
CFM 445 3.0
CFM Technical Elective 3.0
CFM Technical Elective 3.0
Civilization 23.0
Arts/Letters 3.0
Total Hours 15.5

Note: Students are encouraged to complete an average of 15–16 credit hours each semester or 30–32 credit hours each year, which could include spring and/or summer terms. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

BS in Construction and Facilities Management: Construction Management (396521) 2022-2023 Program Requirements (84 Credit Hours)

Students receiving C- or lower grades in required courses will be placed on department probationary status.

requirement 1 Complete 16 courses

*ACC 200 - Principles of Accounting 3.0
CCE 101 - Introduction to Civil and Construction Engineering 1.0
CCE 113 - Construction Modeling 3.0
CCE 170 - Computer Methods 3.0
CCE 201 - Sustainable Infrastructure 2.0
CFM 105 - Fundamentals of Construction and Facilities Management 3.0
CFM 120 - Light Structural Systems 3.0
CFM 220 - Mechanical Systems 3.0
CFM 241 - Electrical Systems in Construction 2.0
CFM 311 - Estimating Processes 3.0
CFM 345 - Construction Safety Management 3.0
CFM 411 - Pre-Construction Services 3.0
CFM 412 - Construction Scheduling and Cost Control 3.0
CFM 415 - Construction Project Management and Control 3.0
CFM 445 - Construction Company Operations and Management 3.0
CFM 485 - Construction Contracts and Law 3.0

requirement 2 Complete 1 course
*CCE 231 - Foundations of Global Leadership 3.0

requirement 3 Complete 1 course
M COM 320 - Management Communication 3.0
WRTG 316 - Technical Communication 3.0

requirement 4 Complete 2.5 hours from the following course(s)
Complete five enrollments of the following (cannot be taken the same semester as CFM 491):
CFM 291R - Undergraduate Seminar 0.5
You may take this course up to 5 times.

requirement 5 Complete 1 course
Complete the following during the next-to-last semester before graduation.
CFM 491 - Senior Seminar 0.5

requirement 6 Complete 10 courses
CCE 103 - Engineering Mechanics--Statics 3.0
CCE 203 - Engineering Mechanics--Mechanics of Materials 3.0
CCE 214 - Geomatics 3.0
CCE 306 - Civil Engineering Materials: Concrete, Masonry, and Asphalt 1.5
CFM 302 - Structures & Strength of Matls 4.0
CFM 305 - Concrete, Masonry, and Asphalt Methods 1.5
CFM 342 - Construction Equipment and Soils 3.0
MATH 112 - Calculus 1 4.0
PHSCS 121 - Introduction to Newtonian Mechanics 3.0
*STAT 121 - Principles of Statistics 3.0

requirement 7 Complete 6.0 hours from the following option(s)

Technical Elective Courses:

option 7.1 Complete up to 6.0 hours from the following course(s)
CFM 426 - Real Estate Principles and Development 3.0
CFM 450 - Virtual Design & Construction 3.0

option 7.2 Complete up to 3.0 hours from the following group(s)
group 7.2.1 Complete up to 3.0 hours from the following course(s)
CFM 500 - Construction Innovation and Technology 3.0
CFM 530 - Construction Company Operations and Human Resources Management 3.0
CFM 540 - Managing Risk in Construction 3.0
CFM 550 - Construction Company Development and Strategic Planning 3.0
CFM 555 - Construction Company Financial Management 3.0
CFM 594R - Special Topics in Construction Management 3.0v
group 7.2.2 Complete up to 3.0 hours from the following course(s)
CE 400A - Civil Engineering Seminar 0.5
CE 400B - Civil Engineering Seminar 0.5
CE 414 - Engineering Applications of GIS 3.0
CE 421 - Structural Steel Design 3.0
CE 424 - Reinforced Concrete Design 3.0
CE 427 - International Megastructures 3.0
CE 431 - Hydrology 3.0
CE 433 - Hydraulic Engineering 3.0
CE 439 - Water Resources Study Abroad 3.0
CE 442 - Foundation Engineering 3.0
CE 451 - Environmental Engineering Processes 3.0
CE 461 - Geometric Design of Highways 3.0
CE 467 - International Megacities 3.0
CE 471 - Civil Engineering Practice 1.0
CE 472 - Civil Engineering Design 3.0
CE 495R - Global Engineering Outreach Projects 3.0v
CE 498R - Directed Studies in Civil Engineering 18.0v
CE 500 - (CE - Me En) Design and Materials Applications 3.0
CE 501 - (CE - MeEn) Stress Analysis and Design of Mechanical Structures 3.0
CE 504 - (CE - Me En) Computer Structural Analysis and Optimization 3.0
CE 505 - Portland Cement Concrete Mixture Design and Analysis 3.0
CE 507 - (CE - Me En) Linear Finite Element Methods 3.0
CE 508 - (CE - Me En) Structural Vibrations 3.0
CE 514 - Geospatial Environmental Engineering 3.0
CE 521 - Advanced Structural Steel Design 3.0
CE 523 - (CE - Me En) Aircraft Structures 3.0
CE 525 - Bridge Structures 3.0
CE 526 - Bridge Preservation 1.5
CE 528 - Masonry Design 3.0
CE 529 - Structural Wood Design 3.0
CE 531 - Principles of Hydrologic Modeling 3.0
CE 533 - Advanced Hydraulic Routing 3.0
CE 534 - Hydroinformatics 3.0
CE 535 - Hydraulic Design of Channels and Control Structures 3.0
CE 540 - Geo-Environmental Engineering 3.0
CE 542 - Deep Foundations and Retaining Systems 3.0
CE 543 - Chemical Stabilization of Soils 1.5
CE 544 - Seepage and Slope Stability Analysis 3.0
CE 545 - Geotechnical Analysis of Earthquake Phenomena 3.0
CE 547 - Groundwater Modeling 3.0
CE 551 - Water Treatment Facilities Design 3.0
CE 553 - Mechanical Behavior of Materials 3.0
CE 555 - Environmental Chemistry 3.0
CE 562 - Traffic Engineering: Characteristics and Operations 3.0
CE 563 - Pavement Design 3.0
CE 565 - Urban Transportation Planning 3.0
CE 566 - Pavement Management 3.0
CE 568 - Asphalt Mixture Design and Analysis 1.5
CE 570 - (CE - Me En) Computer-Aided Engineering Software Development 3.0
CE 575 - (CE - Me En) Optimization Techniques in Engineering 3.0
CE 580 - Technical Writing for Publication 1.5
CE 594R - Selected Problems in Civil Engineering 3.0v

Complete department packet and exit interview.
Students must complete 300 hours of pre-approved construction/facilities-related work after declaring the major and must submit a report during the CFM 491 class.

BS in Construction and Facilities Management: Construction Management (396521) 2022-2023

THE DISCIPLINE:
Construction management focuses on real estate development and construction project management. It requires technical expertise and the ability to work with a wide variety of industry professionals. Construction management offers careers that require abilities in project management, business management, engineering, architecture, and an understanding of construction systems.

ACADEMIC QUALITY:
Facilities - The department utilizes the most advanced and innovative construction related university computer laboratories in the nation. Facilities for construction technologies, CAC, and other related areas are also high quality.
Special programs - The CM program is involved in a variety of special activities during the year.

- National Student Construction Management competition - National Association of Home Builders.
- National and Regional Student Construction Management competition - Associated Schools of Construction.
- Other community service projects (Highway cleanup, Parade of Homes, etc.).
- Habitat for Humanity.

Faculty expertise - The program has seven faculty members with a wide range of interests and expertise. All faculty have experience in industry. Three faculty have a nationwide reputation in project management (scheduling) and estimating. Graduating majors commonly comment that the faculty offer excellent program advisement, are friendly and have personal interest in them as students. Many of the faculty are involved in writing for professional and academic journals and in making presentations at regional and national conventions.
PROFESSIONAL AND HONOR SOCIETIES:

INTERNSHIP EXPERIENCES:
Internships and practical experience are all required. One of the hallmarks of the program is the 300 hour practical application of skills and technologies requirement. Pre-professional training
- Construction Management is an ideal course for pre-architectural, business, and law students.

FINANCING:
Scholarships are available for declared majors. Also, a number of upper-division students are hired as laboratory assistants and teaching assistants.

CAREERS:
Graduates find employment in a variety of construction industry-related positions. Typical position titles are superintendent, estimator, scheduler, field engineer, general contractor, safety engineer, project manager, procurement manager, project engineer, cost controller, site analyst, etc. Alumni find they are qualified for employment in all types of construction. It is a broad-based program that provides the training and experience needed for several occupational opportunities.

This major is also excellent preparation for students desiring graduate study in architecture, business management, or construction law.

GRADUATE SCHOOL:
There will be increasing need for construction managers at all levels. These managers should possess advanced skills in management because of the increased interest in a Construction Management advanced degree, BYU’s CM program has a CM Master’s degree.

MAP DISCLAIMER
While every reasonable effort is made to ensure accuracy, there are some student populations that could have exceptions to listed requirements. Please refer to the university catalog and your college advisement center/department for complete guidelines.

DEPARTMENT INFORMATION

Civil and Construction Engineering
Brigham Young University
430 Engineering Building
Provo, UT 84602
Telephone: 801-422-2811
Web: http://cce.byu.edu
Email: cce@byu.edu

Engineering Advisement Center
Brigham Young University
246 Engineering Building
Provo, UT 84602
Telephone: 801-422-4325
Email: engtech-advisement@byu.edu