CONSTRUCTION MANAGEMENT (CMGT)

See Course Description Symbols and Terms (https://catalog.csuchico.edu/academic-standards-policies/course-description-symbols-terms/) for an explanation of course description terminology and symbols, the course numbering system, and course credit units.

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**CMGT 100 Concepts of Construction** 3 Units
Corequisites: CMGT 105.
Typically Offered: Fall and spring
This course introduces fundamental construction management concepts including the roles and responsibilities of project stakeholders, project delivery systems, contract types, estimating, scheduling, safety, quality control, cost management, trade coordination, and documentation of the work. 3 hours discussion. (002055)
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Lower Division

**CMGT 101 Construction Management Career Preparation** 1 Unit
Typically Offered: Fall and spring
This course helps Construction Management students prepare for careers in the construction industry. It provides students with the opportunity for creating their resumes, learning successful interviewing techniques, obtaining internships, and exploring the many different possible careers in the construction industry. 3 hours laboratory. (020453)
Grade Basis: Credit/No Credit
Repeatability: You may take this course for a maximum of 1 unit
Course Attributes: Lower Division

**CMGT 105 Computer Applications in Construction Management** 3 Units
Corequisites: CMGT 100.
Typically Offered: Fall and spring
This course introduces industry foundation technical computing for Construction Managers. It introduces commercial software commonly used in the management and control of construction projects. Application areas include office suite of programs, paperless workflows, estimating, and scheduling. 2 hours activity, 2 hours discussion. (022069)
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Lower Division; Laptop required

**CMGT 110 Construction Graphics** 3 Units
Prerequisite: CMGT 100, CMGT 105 both with a grade of C or higher.
Typically Offered: Fall and spring
This course introduces the use of lines, symbols, and annotations in construction drawings. It also includes 3D modeling software to visualize and build a model of a commercial building from a set of construction documents. This model is used to produce 2D construction documents. 2 hours activity, 2 hours discussion. (002056)
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Lower Division; Laptop required

**CMGT 135 Construction Materials and Systems** 3 Units
Prerequisite: CMGT 100, CMGT 105 both with a grade of C or higher.
Typically Offered: Fall and spring
This course includes a comprehensive study of the principal materials used in the construction industry and the various systems employing these materials to build structures. 3 hours discussion. (002057)
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Lower Division; Laptop required

**CMGT 198 Special Topics** 1-3 Units
Prerequisite: Department permission.
Typically Offered: Fall and spring
This course is for special topics offered for 1.0-3.0 units. Typically the topic is offered on a one-time-only basis and may vary from term to term and be different for different sections. See the Class Schedule for the specific topic being offered. 3 hours supervision. (002060)
Grade Basis: Graded
Repeatability: You may take this course more than once
Course Attributes: Lower Division

**CMGT 210 Analysis of Construction Drawings and Specifications** 3 Units
Prerequisite: CMGT 110, CMGT 135 both with a grade of C or higher.
Typically Offered: Fall and spring
This course includes a detailed and interactive study of construction drawings and specifications. Software is utilized to aid in understanding the plans and specifications and extract key project information with emphasis on material quantity takeoff. 2 hours activity, 2 hours discussion. (002058)
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Lower Division; Laptop required

**CMGT 235 Electrical and Mechanical Systems** 3 Units
Prerequisite: CMGT 210 with a grade of C or higher.
Typically Offered: Fall and spring
This course includes an introduction to mechanical, electrical, and plumbing systems; integration of these systems into the building design and construction process; with an emphasis on sustainability. 3 hours discussion. (002059)
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Lower Division; Laptop required

**CMGT 275W Architectural History (W)** 3 Units GE, W
Typically Offered: Fall and spring
This course presents a study of architectural history with an emphasis on contemporary projects. 3 hours discussion. (021203)
General Education: Arts (C1)
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Lower Division; Writing Course
CMGT 330  Soil Mechanics, Concrete, and Construction Surveying  3 Units
Prerequisite: CHEM 107 or CHEM 111, CMGT 210 (with a grade of C or higher), MATH 120 (with a grade of C- or higher), PHYS 202A or PHYS 204A.

Typically Offered: Fall and spring
This course includes a study of the properties and behaviors of soils, aggregates, and concrete when used as construction materials. Introduction to concrete including mix design, slump tests, and compressive strength. Fundamentals of surveying including staking, layout, and elevation control. 2 hours discussion, 3 hours laboratory. (002063)

Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Upper Division; Laptop required

CMGT 332  Construction Method Analysis  3 Units
Prerequisite: GE Oral Communication (A1) requirement; CMGT 210, CMGT 235 both with a grade of C or higher.

Typically Offered: Fall and spring
This course analyzes methods and techniques of a construction project in a multi-team planning environment. Using Building Information Modeling, students analyze constructability through jobsite logistics, clash detection, log books, and short term resource scheduling. Jobsite labor risk is studied with a focus on productivity tracking, analysis, methods improvement, and safety. 2 hours activity, 2 hours discussion. (002064)

Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Upper Division; Laptop required

CMGT 335  Construction Equipment  3 Units
Prerequisite: CMGT 330, CIVL 411, or faculty permission.

Typically Offered: Fall and spring
This course includes a study of the equipment used in the construction industry. Included are the types, capabilities, selection, purchase/lease/rent options, and balancing of equipment. 3 hours discussion. (002066)

Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Upper Division; Laptop required

CMGT 350  Principles of Statics and Strength of Materials  3 Units
Prerequisite: MATH 120 (with a grade of C- or higher), PHYS 202A or PHYS 204A.

Typically Offered: Fall and spring
This course includes a study of applied engineering mechanics including forces, static equilibrium, and simple truss analysis. An emphasis is placed on the concepts and mathematical calculations of stress, strain, and deflection within structural elements encountered in construction. The rationale and factors of safety for sizing and design of these elements is reviewed. 3 hours discussion. (022067)

Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Upper Division; Laptop required

CMGT 352  Electrical and Mechanical Construction Estimating  3 Units
Prerequisite: CMGT 235.

Typically Offered: Fall and spring
Costs dictated by the contract documents for the electrical and mechanical systems in residential, commercial, industrial, specialty, and line construction projects are studied. 2 hours discussion, 2 hours laboratory. (002073)

Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Upper Division; Laptop required

CMGT 360W  Construction Project Management (W)  3 Units W
Prerequisite: GE Oral Communication (A1) requirement, GE Written Communication (A2) requirement, ACCT 201, CMGT 210 (with a grade of C or higher).

Typically Offered: Fall and spring
This course reinforces the construction project life-cycle from conception through completion. The processes to effectively manage a construction project are introduced and practiced, including: project delivery systems and contracts, pre-construction services, construction safety practices, RFI’s and submittals, quality control processes, cost control, project closeout, and commissioning. 3 hours lecture. (020325)

Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Upper Division; Laptop required; Writing Course

CMGT 380  Green Building Practices and LEED Certification  3 Units
Typically Offered: Fall only
This course explores how new buildings are designed and constructed using green building strategies. Students learn how LEED Accredited Professionals manage the building certification process and the documents required by the US Green Building Council to verify that the requirements for LEED certification are met. The course also prepares students to take the USGBC LEED AP Certification exam. 3 hours lecture. (020504)

Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Upper Division; Laptop required

CMGT 385  Concepts of Sustainable Construction  3 Units
Prerequisite: CMGT 235 with a grade of C or higher.

Typically Offered: Fall and spring
This course evaluates green building techniques, sustainable practices, and Lean Construction throughout the entire project life cycle. Students are introduced to the various requirements for green building rating systems and certifications. Content is provided to assist students in their self-study to take the LEED Green Associate exam. 3 hours lecture. (022068)

Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Upper Division; Sustainable Course; Laptop required

CMGT 389  Internship in Construction Management  3 Units
Prerequisite: Department Permission.

Typically Offered: Spring, summer, fall
This course requires the student to do one summer internship for a minimum of 10 weeks with an approved heavy construction company. 3 hours lecture. (002062)

Grade Basis: Credit/No Credit
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Upper Division
<table>
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<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>Prerequisite</th>
<th>Typically Offered</th>
<th>Grade Basis</th>
<th>Repeatability</th>
<th>Course Attributes</th>
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<tr>
<td>CMGT 398</td>
<td>Special Topics</td>
<td>1-3</td>
<td>Faculty permission.</td>
<td>Fall and spring</td>
<td>Graded</td>
<td>You may take course more than once</td>
<td>Upper Division</td>
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<tr>
<td>CMGT 399</td>
<td>Special Problems</td>
<td>1-3</td>
<td>Faculty permission.</td>
<td>Fall and spring</td>
<td>Graded</td>
<td>You may take course more than once</td>
<td>Upper Division</td>
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<td>CMGT 440</td>
<td>Temporary Structures</td>
<td>3</td>
<td>CMGT 350, CIVL 311, or faculty permission.</td>
<td>Fall and spring</td>
<td>Graded</td>
<td>You may take course for a maximum of 6 units</td>
<td>Upper Division</td>
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<tr>
<td>CMGT 450</td>
<td>Building Estimating</td>
<td>3</td>
<td>ACCT 202, CMGT 332, CMGT 360W, CMGT 385.</td>
<td>Fall and spring</td>
<td>Graded</td>
<td>You may take course for a maximum of 3 units</td>
<td>Upper Division</td>
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<td>CMGT 455</td>
<td>Construction Cost Management</td>
<td>3</td>
<td>CMGT 450, CIVL 302W, or faculty permission.</td>
<td>Fall and spring</td>
<td>Graded</td>
<td>You may take course for a maximum of 3 units</td>
<td>Upper Division</td>
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<td>CMGT 457</td>
<td>Project Scheduling and Control</td>
<td>3</td>
<td>CMGT 332; CMGT 360W; CIVL 495 or faculty permission.</td>
<td>Fall and spring</td>
<td>Graded</td>
<td>You may take course for a maximum of 3 units</td>
<td>Upper Division</td>
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<tr>
<td>CMGT 458</td>
<td>Heavy Construction Estimating</td>
<td>3</td>
<td>CMGT 335 or faculty permission.</td>
<td>Fall and spring</td>
<td>Graded</td>
<td>You may take course for a maximum of 3 units</td>
<td>Upper Division</td>
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<tr>
<td>CMGT 460H</td>
<td>Legal Aspects of Construction - Honors (W)</td>
<td>3</td>
<td>Admission to the department’s Honors in the Major program, GE Written</td>
<td>Fall and spring</td>
<td>Graded</td>
<td>You may take course for a maximum of 3 units</td>
<td>Upper Division</td>
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<tr>
<td>CMGT 460W</td>
<td>Legal Aspects of Construction</td>
<td>3</td>
<td>GE Written Communication (A2) requirement, BLAW 203, BLAW 414, faculty</td>
<td>Fall and spring</td>
<td>Graded</td>
<td>You may take course for a maximum of 3 units</td>
<td>Upper Division</td>
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<tr>
<td>CMGT 461</td>
<td>Project Scheduling and Control</td>
<td>3</td>
<td>GE Written Communication (A2) requirement, BLAW 203, MGMT 303, senior</td>
<td>Fall and spring</td>
<td>Graded</td>
<td>You may take course for a maximum of 3 units</td>
<td>Upper Division</td>
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*Typically Offered: Fall and spring

Grade Basis: Graded

Repeatability: You may take this course for a maximum of 3 units

Course Attributes: Upper Division; Laptop required
CMGT 462 Construction Contracts 3 Units
Prerequisite: CMGT 460W.
Typically Offered: Fall and spring
This course reviews current contracting systems and documents utilized for construction contracts. Students examine and analyze the US Department of Labor Laws and the California Labor Code as these laws pertain to construction labor contracts, employment regulations, workers' compensation, and safety. 3 hours lecture. (021409)
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Upper Division; Laptop required

CMGT 485 Construction Management Competition 3 Units
Typically Offered: Fall and spring
This course prepares interested students for regional and national construction management competitions sponsored by the Associated Schools of Construction, National Association of Home Builders, Associated Builders Contractors, and other competition sponsors. Areas of preparation include construction management business and cost management, contracts, plan reading, specifications, estimating, scheduling, equipment, safety, team building, leadership, and presentation skills. 3 hours lecture. (020396)
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 6 units
Course Attributes: Graduate Division

CMGT 489 Const Mgmt Cooperative Ed 1-3 Units
Prerequisite: CMGT 210, 60 units within the CMGT major, faculty permission.
Typically Offered: Fall and spring
This course is an internship offered for 1.0-3.0 units. You must register directly with a supervising faculty member. This program is designed to provide the student with management and administrative experiences within the construction industry. 3 hours lecture. (002074)
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 15 units
Course Attributes: Upper Division

CMGT 498 Special Topics in Const Mgmt 1-3 Units
Typically Offered: Fall and spring
This course is for special topics offered for 1.0-3.0 units. Typically the topic is offered on a one-time-only basis and may vary from term to term and be different for different sections. See the Class Schedule for the specific topic being offered. 3 hours discussion. (002082)
Grade Basis: Graded
Repeatability: You may take this course more than once
Course Attributes: Upper Division

CMGT 499 Special Problems 1-3 Units
Prerequisite: Faculty permission.
Typically Offered: Fall and spring
This course is an independent study of special problems offered for 1.0-3.0 units. You must register directly with a supervising faculty member. 3 hours supervision. (002083)
Grade Basis: Credit/No Credit
Repeatability: You may take this course for a maximum of 6 units
Course Attributes: Upper Division

CMGT 499H Honors Project in Construction Management 3 Units
Prerequisite: Admission to the department's Honors in the Major program; CMGT 460HW with a grade of B or higher; faculty permission.
Typically Offered: Fall and spring
Open by invitation to construction management majors who have a GPA of 3.5 or higher. The culminating work of this course will be the written and oral presentation of a project of value in the field of construction management. 9 hours supervision. (002084)
Grade Basis: Graded
Repeatability: You may take this course for a maximum of 3 units
Course Attributes: Upper Division

CMGT 697 Independent Study 1-3 Units
Prerequisite: Faculty permission.
Typically Offered: Fall and spring
This course is a graduate-level independent study offered for 1.0-3.0 units. You must register directly with a supervising faculty member. 9 hours supervision. (002086)
Grade Basis: Report in Progress: Graded
Repeatability: You may take this course for a maximum of 6 units
Course Attributes: Graduate Division

CMGT 698 Advanced Topics in Const Mgmt 1-3 Units
Prerequisite: Department permission.
Typically Offered: Inquire at department
This course is for special topics offered for 1.0-3.0 units. Typically the topic is offered on a one-time-only basis and may vary from term to term and be different for different sections. See the Class Schedule for the specific topic being offered. 9 hours supervision. (002085)
Grade Basis: Graduate Graded
Repeatability: You may take this course for a maximum of 6 units
Course Attributes: Graduate Division

CMGT 699P Master's Project 1-6 Units
Prerequisite: Department permission.
Typically Offered: Fall and spring
You must register directly with a supervising faculty member. 3 hours supervision. (002089)
Grade Basis: Report in Progress: CR/NC
Repeatability: You may take this course for a maximum of 6 units
Course Attributes: Graduate Division

CMGT 699T Master's Thesis 1-6 Units
Typically Offered: Fall and spring
3 hours supervision. (002087)
Grade Basis: Report in Progress: CR/NC
Repeatability: You may take this course for a maximum of 6 units
Course Attributes: Graduate Division