

# CONCRETE INDUSTRY MANAGEMENT (CIMT)

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.

## CIMT 101 Introduction to Concrete 1 Unit

**Corequisites:** May be taken concurrently with CIMT 231 with faculty permission.

**Typically Offered:** Fall only

An overview of the history, career opportunities, job functions, and professional organizations in the concrete industry. Students are introduced to the Concrete Industry Management curriculum, its instructional expectations and methodologies. 1 hour discussion. (020294)

**Grade Basis:** Graded

**Repeatability:** You may take this course for a maximum of 1 unit

**Course Attributes:** Lower Division

## CIMT 125 Concrete Projects Drawings Reading 2 Units

**Prerequisite:** CIMT 101 and MATH 119 both with a grade of C- or higher.

**Typically Offered:** Spring only

This course covers reading and interpreting drawings related to concrete projects. This course includes a detailed study of drawings of concrete foundation, piers, slabs, walls, and frames. 2 hours activity, 1 hour discussion. (021714)

**Grade Basis:** Graded

**Repeatability:** You may take this course for a maximum of 2 units

**Course Attributes:** Lower Division; Laptop required

## CIMT 198 Special Topics 1-3 Units

**Prerequisite:** To be established when course is formulated.

**Typically Offered:** Inquire at department

Special topics are generally offered one time only. Different sections may have different topics. See the Class Schedule for specific topics being offered. A maximum of 6.0 units of special topics may be counted toward the major. 3 hours discussion. (020296)

**Grade Basis:** Graded

**Repeatability:** You may take this course more than once

**Course Attributes:** Lower Division

## CIMT 227 Safety Practices and Management 3 Units

**Typically Offered:** Spring only

This course covers Occupational Safety and Health Administration (OSHA) regulations, policies, and procedures for concrete and construction industry as well as safety and health principles (OSHA 1926 standards). The course also includes Mine Safety and Health Administration (MSHA) New Miner Training certification. 3 hours discussion. (021641)

**Grade Basis:** Graded

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

**Course Attributes:** Lower Division

## CIMT 231 Fundamentals of Concrete Properties & Testing 3 Units

**Prerequisite:** CIMT 101 with a grade of C- or higher; CHEM 107; MATH 119 or MATH 120.

**Typically Offered:** Fall only

Effects of concrete-making materials (aggregates, cements, admixtures, etc.) on the properties of fresh and hardened concrete. Concrete mixture proportioning calculations and statistical analysis of strength tests are also studied. 2 hours discussion, 3 hours laboratory. (020297)

**Grade Basis:** Graded

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

**Course Attributes:** Lower Division

## CIMT 241 Concrete Construction Methods 3 Units

**Prerequisite:** CIMT 231 with a grade of C- or higher.

**Typically Offered:** Spring only

Forming, shoring, placing, and reinforcing operations. Transporting, placing, consolidating, finishing, jointing, and curing concrete for cast-in-place foundations, pavements, on-ground slabs, structural frames, and other structural members are studied. Other topics include waterproofing concrete foundations and erecting precast concrete members. 3 hours discussion. (020298)

**Grade Basis:** Graded

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

**Course Attributes:** Lower Division

## CIMT 298 Special Topics 1-3 Units

**Prerequisite:** To be established when course is formulated.

**Typically Offered:** Inquire at department

Special topics are generally offered one time only. Different sections may have different topics. See the Class Schedule for specific topics being offered. A maximum of 6.0 units of special topics may be counted toward the major. 3 hours discussion. (020299)

**Grade Basis:** Graded

**Repeatability:** You may take this course more than once

**Course Attributes:** Lower Division

## CIMT 325 Concrete Project Estimating and Bidding 3 Units

**Prerequisite:** CIMT 125; CIMT 241; MATH 119 or MATH 120.

**Typically Offered:** Fall only

This course focuses on estimating and contracting procedures for concrete projects from a concrete subcontractor perspective. Topics include concrete, formwork, and steel reinforcement takeoff and cost estimation as well as bidding and contracting procedures. 2 hours activity, 2 hours discussion. (021643)

**Grade Basis:** Graded

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

**Course Attributes:** Upper Division; Laptop required

## CIMT 348 Concrete Repair and Restoration 3 Units

**Prerequisite:** CIMT 241 with a grade of C- or higher, PHYS 202A.

**Typically Offered:** Fall only

This course provides an understanding of historic concrete building practices leading to informed evaluation and repair of older structures for reuse. The causes of service failures, including material failure, improper design, maintenance failure, and environmental effects are studied. The presentation of case studies in failure analysis and repair approaches occur throughout the course, along with participation in ongoing, long-term studies of repair systems. 2 hours activity, 2 hours discussion. (020300)

**Grade Basis:** Graded

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

**Course Attributes:** Upper Division

**CIMT 363W Sustainability and the Built Environment****(W)**  **3 Units GE, W****Prerequisite:** GE Oral Communication (A1); GE Written Communication (A2); GE Critical Thinking (A3); GE Mathematics/Quantitative Reasoning (B4) requirements, or consent of the instructor.**Typically Offered:** Fall and spring

An introduction to the fundamental concepts of sustainability. Special emphasis is placed on understanding the interaction of the built environment with natural systems, and the role of technical and non-technical (economic, ecological, ethical) issues in shaping engineering decisions. Issues such as green buildings/developments, renewable energies, and concrete's role in helping to meet LEED certification are discussed. This course is open to engineers and non-engineers interested in all aspects of the built environment. A grade of C- or higher is required for CIMT majors. 3 hours discussion. (020301)

**General Education:** Upper-Division Scientific Inq/Quant Reason (UDB); Sustainability and Climate Change Pathway**Grade Basis:** Graded**Repeatability:** You may take this course for a maximum of 3 units**Course Attributes:** Upper Division; Sustainable Course; Writing Course**CIMT 365 Advanced Concrete Technology** **3 Units****Prerequisite:** CIMT 231 with a grade of C- or higher.**Typically Offered:** Spring only

This course covers advanced concrete properties, test methods, and mix designs. Topics include high performance concrete (HPC), self-consolidating concrete (SCC), pervious concrete, mass concrete, roller compacted concrete (RCC), decorative concrete, and fiber reinforced concrete. Corresponding ASTM and ACI standards and guidelines are covered. 2 hours discussion, 3 hours laboratory. (021789)

**Grade Basis:** Graded**Repeatability:** You may take this course for a maximum of 3 units**Course Attributes:** Upper Division**CIMT 389 Concrete Industry Internship** **1-3 Units****Prerequisite:** CIMT 125 and CIMT 241 (may be taken concurrently) with a grade of C- or higher and approval of faculty internship coordinator.**Typically Offered:** Spring, summer, fall

Technical and managerial experience in an industrial setting with opportunities to apply course work to professional practice. Students are evaluated by their supervisor, and a final report must be submitted by each student detailing the internship experience. The minimum duration is 400 hours under the direct supervision of an on-site manager in a concrete-related company. 0 hours independent study. (020305)

**Grade Basis:** Credit/No Credit**Repeatability:** You may take this course for a maximum of 3 units**Course Attributes:** Upper Division**CIMT 399 Special Problems** **1-3 Units****Prerequisite:** Approval of supervising faculty member.**Typically Offered:** Inquire at department

Independent study of a special problem. Visit the program office for the registration procedure. 9 hours supervision. (020306)

**Grade Basis:** Credit/No Credit**Repeatability:** You may take this course for a maximum of 6 units**Course Attributes:** Upper Division**CIMT 453 Ready Mixed Concrete Production Management** **3 Units****Prerequisite:** CIMT 241 (C- or higher), FINA 307, OSCM 440.**Typically Offered:** Fall only

Management of the manufacturing processes common to all concrete product production facilities. Emphasis is on planning, organizing, and controlling production. A study of the differences in the manufacturing process of ready-mixed concrete, concrete masonry, pre-cast concrete, pre-stressed concrete, and concrete pipe is explained through product-specific guest lectures and plant tours. 3 hours discussion. (020309)

**Grade Basis:** Graded**Repeatability:** You may take this course for a maximum of 3 units**Course Attributes:** Upper Division**CIMT 455 Precast Concrete Production Management** **3 Units****Prerequisite:** CIMT 325 and CIMT 348 both with a grade of C- or higher, FINA 307.**Typically Offered:** Spring only

Precast concrete production process for the various concrete elements such as: pipes, box culverts, walls, railroad ties and bridges are covered.

Topics include planning and production process, safety, and quality control management practices. A study of the differences in the manufacturing process of the various precast concrete elements is explained. Various applications of precast concrete are also discussed. 3 hours discussion. (021842)

**Grade Basis:** Graded**Repeatability:** You may take this course for a maximum of 3 units**Course Attributes:** Upper Division**CIMT 466W Concrete Capstone Project (W)** **3 Units W****Prerequisite:** GE Written Communication (A2) requirement; CIMT 325, CIMT 389 and CIMT 453 with a grade of C- or higher.**Typically Offered:** Spring only

Students create a business plan for a concrete related business as well as conduct a concrete research project. The business plan involves gathering data and information, conducting market analysis, developing operation and management plans, and preparing and analyzing financial statements. The business plan report emphasizes critical thinking, technical writing, and oral presentation skills as well as technical and business management knowledge. The technical project focuses on hands-on learning through conducting research on concrete, for which students perform literature reviews, conduct experiments, analyze and present data and write a technical report. Students present their projects to an audience. 2 hours discussion, 3 hours laboratory. (020310)

**Grade Basis:** Graded**Repeatability:** You may take this course for a maximum of 3 units**Course Attributes:** Upper Division; Laptop required; Writing Course**CIMT 498 Special Topics** **1-3 Units****Prerequisite:** To be established when course is formulated.**Typically Offered:** Inquire at department

Special topic generally offered one time only. Different sections may have different topics. See the Class Schedule for specific topics being offered. This course is normally taught by professionals from the field. 3 hours discussion. (020311)

**Grade Basis:** Graded**Repeatability:** You may take this course more than once**Course Attributes:** Upper Division

**CIMT 499 Special Problems 1-3 Units**

**Prerequisite:** Approval of supervising faculty member.

**Typically Offered:** Inquire at department

Independent study of a special problem. Visit the program office for registration procedures. 0 hours supervision. (020312)

**Grade Basis:** Credit/No Credit

**Repeatability:** You may take this course for a maximum of 6 units

**Course Attributes:** Upper Division

**CIMT 598 Advanced Topics 1-3 Units**

**Prerequisite:** To be established when course is formulated.

**Typically Offered:** Inquire at department

This course is for advanced special topics offered for 1.0-3.0 units. typically a topic is offered on a one-time-only basis and topics vary from term to term and section to section. See the Class Schedule for the specific topics being offered. This class may be repeated more than once, but a maximum of 6 units may be counted toward the major. 3 hours seminar. (020313)

**Grade Basis:** Graded

**Repeatability:** You may take this course more than once

**Course Attributes:** Upper Division