Minor Change to an Undergraduate Program

Program Name: Concrete Industry Management (CIM)

Complete only if applicable
Program named above is:
☐ Option within ____________________________ (degree program name)

☐ Advising Pattern within ________________________ (option name)

within ____________________________ (degree program name)

☐ Minor

☐ Certificate

☐ Changes being made affect a subject matter preparation or credential program.

Brief rationale for change:
To better serve our students, we (the CIM program) would like to bring the following changes to CIM curriculum: Replace Math 118 with Math 119 as a required class; reduce CIMT 101 to one unit. Replace CIMT 227 with CIMT 455. Change CIMT 389 course description.

Does the proposed change enhance or support the Diversity Action Plan (see definition & Task 3.1)? ___

If yes, please explain.
No.

Required Signatures

The Department of Concrete Industry Management has reviewed and approves this program change

Chair, Department Curriculum Committee

Department Chair

The College of ECC has reviewed and approves this program change

Chair, College Curriculum Committee

College Dean

Send signature page with proposal attached to Curriculum Services at Undergraduate Education, zip 128 Curriculum Technical Review Completed

Date
The Bachelor of Science in Concrete Industry Management

Student success is the primary goal of the concrete industry management faculty. Upon completion of this program, graduates will have the knowledge, skill, and ability to manage facilities, equipment, materials, processes, technology, information, and people.

Concrete Industry Management Program Goals

Student success in this program is best described by the following attributes of its graduates:

1. First and foremost, CSU, Chico concrete industry management graduates understand how concrete materials and products are produced, used, and tested.
2. They have a thorough understanding of contemporary concrete blending, mixing, transport, placement, and finishing processes.
3. They understand the fundamental behavior of materials and have experience testing material properties.
4. They understand project, quality, and safety management methods and the impact of their application on the financial and economic aspects of concrete materials, products, and services.
5. They use contemporary computer applications, information systems, and software packages.
6. They effectively communicate their ideas in oral, written, and graphical form.
7. They have experience working in teams.
8. They have developed an appreciation for the legal and ethical implications of their work and are aware of the impact of their actions on individuals, society, and the environment.

Total Course Requirements for the Bachelor’s Degree: 120 units

See Bachelor's Degree Requirements in the University Catalog for complete details on general degree requirements. A minimum of 40 units, including those required for the major, must be upper division.

A suggested Major Academic Plan (MAP) has been prepared to help students meet all graduation requirements within four years. You can view MAPs on the Degree MAPs page in the University Catalog or you can request a plan from your major advisor.

General Education Pathway Requirements: 48 units

See General Education in the University Catalog and the Class Schedule for the most current information on General Education Pathway Requirements and course offerings.

This major has approved GE modification(s). See below for information on how to apply these modification(s).

- CIMT 363 is an approved major course substitution for Upper Division Natural Science.
- CIMT 466 is an approved GE Capstone substitution.
Diversity Course Requirements: 6 units

See Diversity Requirements in the University Catalog. Most courses taken to satisfy these requirements may also apply to General Education.

Literacy Requirement:

See Mathematics and Writing Requirements in the University Catalog. Writing proficiency is the major is a graduation requirement and may be demonstrated through satisfactory completion of a course in your major which has been designated as the Writing Proficiency (WP) course for the semester in which you take the course. Students who earn below a C- are required to repeat the course and earn a C- or higher to receive WP credit. See the Class Schedule for the designated WP courses for each semester. You must complete the GE Written Communication (A2) requirement before you may register for a WP course.

Course Requirements for the Major: 87 units

Completion of the following courses, or their approved transfer equivalents, is required of all candidates for this degree.

Lower-Division Requirements: 33 units

11 courses required:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
<th>Type</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 107</td>
<td>General Chemistry for Applied Sciences</td>
<td>4.0</td>
<td>FS</td>
<td>GE</td>
</tr>
<tr>
<td>Prerequisites: Completion of ELM requirement, Intermediate Algebra. A survey of the principles of chemistry, primarily for students in agriculture, industry and technology, and pre-nursing. 3 hours lecture, 3 hours laboratory. This is an approved General Education course. (001826)</td>
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<tr>
<td>CIMT 101</td>
<td>Introduction to Concrete</td>
<td>12.0</td>
<td>FA</td>
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</tr>
<tr>
<td>Corequisite: May be taken concurrently with CIMT 231 with faculty permission. 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. 2 hours discussion. (020294)</td>
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<tr>
<td>CIMT 125</td>
<td>Concrete Projects Drawings Reading</td>
<td>2.0</td>
<td>SF</td>
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<tr>
<td>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. 1 hour discussion, 2 hours activity. (021714)</td>
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<tr>
<td>CIMT 227</td>
<td>Safety Practices and Management</td>
<td>3.0</td>
<td>SP</td>
<td></td>
</tr>
<tr>
<td>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. (021041)</td>
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<tr>
<td>CIMT 231</td>
<td>Fundamentals of Concrete Properties &amp; Testing</td>
<td>3.0</td>
<td>FA</td>
<td></td>
</tr>
<tr>
<td>Prerequisites: CIMT 101 with a grade of C- or higher, CHEM 107, MATH 105, or faculty permission. 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)</td>
<td></td>
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</tr>
</tbody>
</table>
CIMT 241  Concrete Construction Methods  3.0  SP

Prerequisite: CIMT 231 with a grade of C- or higher.
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. 2 hours discussion, 3 hours laboratory. (020298)

ECON 102  Principles of Macroeconomic Analysis  3.0  FS  GE

An introductory survey of macroeconomic analysis. Use of fundamental economic concepts to analyze the over-all economy. Determination of gross national product, rates of unemployment, problems of inflation, recession, and the use of governmental policies. Discussion of current problems. 3 hours lecture. This is an approved General Education course. (002636)

GEOS 102  Physical Geology  3.0  FS  GE

Prerequisites: High school chemistry or physics is recommended; students with no previous science courses are advised to enroll in GEOS 101. No college credit for those who have passed GEOS 101.
Physical and chemical processes in the earth, including origin and identification of rocks and minerals; earth’s interior; movements and major features of the earth’s crust; erosion and sedimentation; geological structures; topographic maps; mineral resources. 2 hours lecture, 3 hours laboratory. This is an approved General Education course. (004669)

MATH 105  Statistics  3.0  FS  GE

Prerequisites: Completion of ELM requirement.
Summary of numerical data, elementary probability, distributions, and introduction to statistical inference. 1.5 hours lecture, 1.5 hours discussion. This is an approved General Education course. (005501)

MATH 119  Precalculus Mathematics  4.0  FS  GE

Prerequisites: Completion of ELM requirement, and either 1/2 year of high school trigonometry or MATH 118 (may be taken concurrently). Completion of ELM requirement.
Functions and graphs, including polynomial, rational, exponential, logarithmic, and trigonometric functions. Systems of equations and inequalities, polar and parametric equations, complex numbers, and analytic trigonometry. 4 hours discussion. This is an approved General Education course. (005504)

PHYS 202A  General Physics I  4.0  FS  GE

Prerequisites: High school physics or faculty permission. High school trigonometry and second-year high school algebra or equivalent (MATH 051 and MATH 118 at CSU, Chico).
Mechanics, properties of matter, wave motion, sound, heat. Science majors are encouraged to take PHYS 204A instead of this course. 3 hours discussion, 3 hours laboratory. This is an approved General Education course. (007394)

Upper-Division Requirements: 30 units

9 courses required:

CIMT 325  Concrete Project Estimating and Bidding  3.0  FA

Prerequisite: CIMT 241.
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 discussion, 2 hours activity. (021643)

CIMT 348  Concrete Repair and Restoration  3.0  FA

Prerequisites: CIMT 241 with a grade of C- or higher, PHYS 202A.
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 discussion, 2 hours activity. (020300)

CIMT 363  Sustainability and the Built Environment  3.0  SP

Prerequisite: ENGL 1301 or JOUR 1301 (or equivalent) with a grade of C- or higher.
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)

CIMT 365  Advanced Concrete Technology  3.0  SP

Prerequisites: CIMT 241 with a grade of C- or higher
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 will be covered. (3 units: two hours discussion, three hours lab)

CIMT 389  Concrete Industry Internship  1.0-3.0  SMF

Prerequisites: CIMT 241 and approval of instructor/internship coordinator/CIMT 297 and approval of faculty internship coordinator prior to off-campus assignment.
Technical and managerial experience in an industrial setting with opportunities to apply course work to professional practice. Students enroll for one unit during summer and for two units during the following fall semester. 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. It is required that students take and pass OSHA 30-hour construction class online. 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. 6 hours independent study. You may take this course more than once for a maximum of 3.0 units. Credit/no credit grading. (020305)

CIMT 453  Concrete Facilities Management  3.0  FA

Prerequisites: OMSC 306.
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)
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Pre-requisites</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMGT 354</td>
<td>Concrete Production Management</td>
<td>3.0</td>
<td>CMGT 350, 356</td>
<td></td>
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<tr>
<td>CMGT 356</td>
<td>Concrete Capable Project</td>
<td>3.0</td>
<td>CMGT 350, 354, 356</td>
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</tr>
<tr>
<td>CMPE 48</td>
<td>Operations Management</td>
<td>3.0</td>
<td>CMGT 356</td>
<td></td>
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<tr>
<td>CMPE 46</td>
<td>Legal Aspects of Construction</td>
<td>3.0</td>
<td>CMGT 356</td>
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<tr>
<td>CMGT 227</td>
<td>Commented [FR45]: This course was replaced by CMGT 354</td>
<td>3.0</td>
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</tr>
</tbody>
</table>

**Prerequisites:** CMGT 350 and CMGT 354 both with a grade of C or higher.

**Course Description:**
- Principles of Soil Mechanics and Foundations
- Concrete Production Management
- Concrete Capable Project
- Operations Management
- Legal Aspects of Construction

**Comments:**
- [FR45]: This course was replaced by CMGT 354.
Laboratory and field tests are performed. Introduction to the principles of foundations, earth structures, concrete, and surveying. 2 hours discussion, 3 hours laboratory. (002063)

Formal Business Administration Minor Requirement: 24 units
Concrete Industry Management majors are required to complete a formal Minor in Business Administration. The College of Business requires the following courses, or their approved transfer equivalents, of all candidates for this minor.

8 courses required:

- ACCT 201 Introduction to Financial Accounting 3.0 FS
- ACCT 202 Introduction to Managerial Accounting 3.0 FS

Prerequisites: ACCT 201.

- BLAW 203 Managing the Legal Environment 3.0 FS

Prerequisites: At least junior standing.

- ECON 103 Principles of Microeconomic Analysis 3.0 FS GE
- FINA 307 Survey of Finance 3.0 FS

Prerequisites: ACCT 201, ECON 103.

- MGMT 303 Survey of Management 3.0 FS
- MKTG 305 Survey of Marketing 3.0 FS
- MINS 301 Corporate Technology Integration 3.0 FS

Grading Requirement:
All courses taken to fulfill major course requirements must be taken for a letter grade except those courses specified by the department as Credit/No Credit grading only.

Advising Requirement:
Advising is mandatory for all majors in this degree program. Consult your undergraduate advisor for specific information.
# Major Academic Plan

**Major:** Bachelor of Science in Concrete Industry Management  
**Option:**  
**Pattern:**

<table>
<thead>
<tr>
<th>First Semester (Fall)</th>
<th>Second Semester (Spring)</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIMT 101 (<em>C-</em>)</td>
<td>PHYS 202A</td>
<td>[*C-] C- or Better is required.</td>
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<tr>
<td>ENGL 130I (GE Area A2) (*C-)</td>
<td>CMIST 131 (GE Area A1) (*C-)</td>
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<tr>
<td>HIST 130</td>
<td>ECON 102 (GE Area D2)</td>
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<tr>
<td>CHEM 107 (GE Area B1)</td>
<td>MATH 105 (GE Area A4) (*C-)</td>
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<tr>
<td>Math 119</td>
<td>CIMT125 (*C-)</td>
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<tr>
<td><strong>Total units:</strong> 15</td>
<td><strong>Total units:</strong> 15</td>
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<thead>
<tr>
<th>Third Semester</th>
<th>Fourth Semester</th>
<th>Notes:</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOS 102</td>
<td>GE Area C1</td>
<td>Transfer Students: It is recommended that you review your Degree Progress Report (DPR) in your Student Center, meet with your Major Department Advisor, and meet with an Academic Advisor in SSC 220 to review General Education, Major, and Graduation requirements.</td>
</tr>
<tr>
<td>ACCT 201</td>
<td>ACCT 202</td>
<td>It is recommended that you meet with your major advisor early in your academic career.</td>
</tr>
<tr>
<td>ECON 103 (GE Area D1)</td>
<td>BLAW 203</td>
<td>Consider meeting the United States Diversity and Global Cultures requirements within GE courses.</td>
</tr>
<tr>
<td>GE Area E</td>
<td>OSCM 306</td>
<td>Complete a minimum of 4 Writing Intensive (WI) courses-one will be met by your Written Communication Course and one by your Capstone Course (CIMT 466); select 2 additional WI courses.</td>
</tr>
<tr>
<td>CIMT 231 (*C-)</td>
<td>CIMT 241 (*C-)</td>
<td></td>
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<tr>
<td><strong>Total units:</strong> 15</td>
<td><strong>Total units:</strong> 15</td>
<td>Apply to graduate one year before anticipated graduation date.</td>
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<table>
<thead>
<tr>
<th>Fifth Semester</th>
<th>Sixth Semester</th>
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</thead>
<tbody>
<tr>
<td>POLS 155</td>
<td>CIMT 365 (<em>C-</em>)</td>
<td></td>
</tr>
<tr>
<td>GE Area A3 (*C-)</td>
<td>MGMT 303</td>
<td></td>
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<tr>
<td>FINS 307</td>
<td>MKTG 305</td>
<td></td>
</tr>
<tr>
<td>CIMT 325 (*C-)</td>
<td>GE UD Pathway</td>
<td></td>
</tr>
<tr>
<td>CIMT 348 (*C-)</td>
<td>CIMT 363</td>
<td></td>
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<tr>
<td><strong>Total units:</strong> 15</td>
<td><strong>Total units:</strong> 15</td>
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<table>
<thead>
<tr>
<th>Seventh Semester</th>
<th>Eighth Semester</th>
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<tbody>
<tr>
<td>GE Area B2</td>
<td>CIMT 455</td>
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<tr>
<td>MINS 301</td>
<td>GE UD Pathway</td>
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<tr>
<td>SMFG 458</td>
<td>CMGT 460 (WP)</td>
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</tr>
<tr>
<td>CIMT 389</td>
<td>GE Area C2</td>
<td></td>
</tr>
<tr>
<td>CIMT 453 (*C-)</td>
<td>CIMT 466</td>
<td></td>
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<tr>
<td><strong>Total units:</strong> 15</td>
<td><strong>Total units:</strong> 15</td>
<td></td>
</tr>
</tbody>
</table>

**Degree Units:** 120  
**Major Units:** 87  
**Elective Units:** 0
Greetings Melody and Nicol.

Please see below email from Rick Ford confirming the CIM change regarding MATH 118 replacement with MATH 119 would be fine with Math department.

This change was approved last year through ECC curriculum committee but I waited to submit the minor change form with other changes that we propose this semester. I am hoping we get all required documents to you soon, Nicol.

Thanks.

Feraidon Ataie, Ph.D.

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From: Ford, Rick
Sent: Wednesday, March 29, 2017 1:38 PM
To: Ataie, Feraidon <fataie@csuchico.edu>
Subject: Re: Math 119

Hi Feraidon,

I can confirm that CIM changing requirements from MATH 118 to MATH 119 can be accommodated by the MATH department. Thanks for the heads up. Do you have any estimate as to when the change will be effective? If this fall we can still make things work and I've already added a couple extra sections.

Rick

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From: "Ataie, Feraidon" <fataie@csuchico.edu>
Date: Wednesday, March 29, 2017 at 9:01 AM
To: Rick Ford <rford@csuchico.edu>
Subject: Re: Math 119

Hi Rick,
Just a follow up on my previous email.

I would appreciate if you could please send me an email saying that Math department is ok with CIM program changing Math 118 to Math 119.

Thanks,

Feraidon Ataie, Ph. D.

On Mar 10, 2017, at 2:22 PM, Ataie, Feraidon <fataie@csuchico.edu> wrote:

Hi Rick,

Nice talking to you this morning.

I'm contacting you regarding Math 119. CIM wants to change Math 118 to Math 119 as a required class in the CIM curriculum. I hope this is ok with your department.

Please let me know if this would create any issues for Math development.

Thanks and have a great spring break.

Feraidon Ataie, Ph. D.