CMAC
CONSTRUCTION MANAGEMENT
ADVISORY COUNCIL

NOVERMBER 2022 MEETING MINUTES

Friday, November 4, 2022 // 9:00am – 3:00pm // Building 186- B202

CMAC Meeting Participants:

- Executive Committee
- Managing Directors Committee
- Board of Directors
- Chairs / Co-Chairs

9:00am – 9:05am | Welcome & Introductions // **Rick Pomeroy,** CMAC President

9:05am – 9:35am **//** General CMAC Business

- Managing Directors Committee Proposal, **Rick Pomeroy,** CMAC President
- Budget Reviews and Decisions, **Jeong Woo,** CM Department Head

9:35am – 10:30am // Department Needs & Discussion // **Jeong Woo,** CM Department Head

- Review May's Discussion Notes
- Faculty In Residence Proposal
- CMAC Webinar Series Proposal
- Senior Project Support

10:30am – 11:30am // Semester Conversion Conversation **// Jeong Woo,** CM Department Head

11:30am – 12:15pm // Lunch Break

12:15pm – 1:15pm // CMAC Committee Reports Breakout Session // **Brad Denney,** CMAC Vice President

- Develop Committee Rock*

1:15pm – 1:45pm // CMAC Committee Reports (3-mins each) // **Brad Denney,** CMAC Vice President

1. Development & Facilities
2. Curriculum and Programs
3. Interdisciplinary
4. Specialty Contractors
5. Construction Technology
6. Community Outreach
7. Events & Programs
8. Membership and Growth
9. Young Alumni

1:45pm – 2:45pm // Construction Management Department

- CM Department Updates // Jeong Woo, CM Department Head
- Student Clubs & Achievements // CM Student Club Leaders

2:45pm – 3:00pm // Meeting Wrap Up // **Rick Pomeroy,** CMAC President

- CMAC Committee Next Steps
- June 9th All-Hands CMAC Meeting

Discussion Notes

9:00am – 9:05am | Welcome & Introductions // **Rick Pomeroy,** CMAC President
9:05am – 9:35am **//** General CMAC Business

- Restructure the Managing Directors Committee
    - More opportunities for engagement for board of directors.
    - Inclusive of board of directors and other CMAC Members
    - Managing Board, diversity of thought by including students, board of directors, managing directors
    - Lack of representation of committee because busy schedule, more involvement
- Vote to change by-laws -> send to board of directors (e-vote)
- Need to find a couple co-chairs

9:35am – 10:30am // Department Needs & Discussion // **Jeong Woo,** CM Department Head

- Budget Review:
    - In terms of financials and growth of membership, successful
    - Revenue: $510, 558 (most revenue from CMAC membership)
    - Workshop and bootcamp (additional revenue)
    - AIC ($250 ea) and Senior Projects (Student Support)
    - AIC: 1 standard exam, assess student outcomes, evaluation of accreditation, exam passing rate (first attempt) 60% nationally, Cal Poly 90%, study packet provided, vehicle to measure understanding, serves the purpose for the accreditation.
    - PLO from statistical assessment report
    - Scores from AIC give school merit
    - CM 461 class self-study for AIC
    - External assessment to compare to national stats not individual schools
    - Better job of describing the important of the exam
    - Bob Stevens, Jeong Woo, and Phil Barlow, can explain to students the importance
    -

10:30am – 11:30am // Semester Conversion Conversation **//** **Jeong Woo,** CM Department Head

- Need more faculty members
    - Can Cal Poly handle more students?
    - Student with soft skills: communications, critical thinking
    - Work +10-20 yrs.
- 2 positions
- Collaborating with industry
- Mentorship programs for transfer students
- Hire mentors (8-9) to guide transfer students
- Outreach to community colleges
    - Courses line up with new semester schedule
    - Coordinate with admissions to adjust the ratio of freshmans to transfers
- Distribute flyers
- West Valley and Cuesta large amt of transfers

- El Camino college, huge construction program
- Need to know requirements to represent Cal Poly at CC
    - Career Services at the CC need to go with faculty
- More time to get proposal in for senior project
- Companies need to consider going through CCCE for supporting students financially (donations go towards membership)
- PLO: 1-20 ACCE required 21-25 University added
- Objectives: bring in more diverse populations into the CM departments
- Students that are transitioning from quarter to semester their units will transfer based on
- When adjusting classes for the semester schedule, the ACCE and AIC are factored in
- Reducing ARCE semester hours (reducing originally required classes) can become an issue
- ARCE -> into some elective classes?
- ARCE focuses mainly on structural, need more focus on MEP
- What is the minimum requirement for ARCE knowledge?
- Course contents need to be evaluated from a deeper level.
- AIC computation focuses, don't get into engineering specifics since it is location dependent
    - Contingent on CM
    - Most relevant knowledge to CM
- Need the structural engineering background
- Need to understand structural principles
- Losing the background that is a large part of the interdisciplinary
- Cal Poly grad has that background knowledge that gives merit and sets them apart
- Keep ARCE 226 and 315
- Integrated Labs
    - Co-teaching can be incorporated, not a popular option among Professors
    - Support in classes from
- Integrated lab is becoming less effort hours, more comparable to GE hours
- 3 lecture courses (6 outside study hours) 3 lab hours (finish in the lab)
- Labs are starting to resemble a GE course
- Senior Project: late graduation due to math and/or senior project
    - Early funding for senior project is necessary
    - Apply for funding early gives the organizations time to evaluate the proposal and the students time to seek other options
    - Add or drop ARCE classes
    - Increase hours for major labs
    - Increase interdisciplinary classes (2: 1 freshman year, 1 senior year)
- Facility capacity 100%
- Faculty capacity 100%
- ARCE classes important for interdisciplinary, soft skills, technical skills for understanding, communication
- ARCE 315 more important (226 is needed for 315)
- Need MEP course
- Full CM class integrating BUS classes (Law, accounting, managerial)
- Projecting, cost prediction, RFIs, budget
- A lot of focus on Bus, less on construction accounting

- Add innovative topics and interdisciplinary classes
- Construction accounting on a construction level
- MEP introduced into 114/113 for 1st year student – systemic integration
- Jeong will reach out to English department (for GWR)
- Technical writing vs corporate communications
- Push GWR alternative portfolio
- Scheduling and estimating
- Need to focus on technical and basic skills
- Not getting into the small details, but getting a better larger idea of the concept
- Methods vary among companies, can't get into nitty gritty
- Survey of post grad needs larger responses
- Company handles internal survey and return to CCCE
- Faculty, outreach team, and Jeong coordinate reaching out to CC.

12:15pm – 1:15pm // CMAC Committee Reports Breakout Session // **Brad Denney,** CMAC Vice President

- Interpersonal relationships and soft skills development
    - Interact with architects and engineers
    - Get departments to work together and develop communication skills
    - Interdisciplinary tech elective not enough because relationships must be formed with architects and engineers
    - Importance of why: manage risk, manage challenges, need to develop skills and technical skills instead of focusing only on grades and results
    - Action Item: Survey of what is expected of students. Top three things expected from new hires.
- Faculty in Residence (Faculty Internship)
    - Gain more work experience to bring back to the classrooms.
- Senior Project
    - Financial support 10k -> 15k: dispersed to couple students
    - Application process involved
    - $20,000 grants for interdisciplinary projects: student must have reasoning for funding and a plan (RFP)

One rock per committee for Spring meeting.

Adjust committee focus

Development

- Rock 1: establish an endowment for faculty
    - Scholarships
    - Fellowship, lower-level funding, assistant professor level,

Curriculum & Programs

- Best approach to support faculty.
- Focus on transition to semester
- Set up meeting with young alum, faculty, and Jeong (Rachell and Jeff set up)

Interdisciplinary

- Reach out to other advisory boards to get together, push for more collaboration
- Nov. 16 Round Table
- Interdisciplinary communication

Specialty Contractors

- Presentation in classes/guest lectures
- A lot of interest from local specialty contractors to participate
- Committee reach out to them to get more guest lectures
- Primary efforts in concrete lab

CTEC

- Include more MEP and specialty
- Increase CTEC membership and involvement
- Interdisciplinary tech approach
- Integrate tech support

Community Outreach

- Reach out to Junior College (reevaluated)

Events and Programs

- Re-engage committee
- Will refocus and re-evaluate through hybrid meeting

Membership Growth

-

Young Alumni

- Increase young alumni
- Tailgate//bimonthly meet-up

How to include new topics such as Prefab with a flavor of a hands-on "Learn by Doing" approach?
Is there any new topical content that we need to consider adding to the CM curriculum?

- Teach new concepts to students
- More faculty collaboration with industry members
- Risk management: PCRA/ICRA credentials
- Two days training (12 hrs) prior to exam
- See slides for more details (contact Tom Kommer)

Misc. General Notes:

- Clark classroom renovations
- Recruiting events: Overall, very successful and high engagement

CMAC

CONSTRUCTION MANAGEMENT ADVISORY COUNCIL

CAL POLY

NOVEMBER 4, 2022

CMAC NOVEMBER 2022

Welcome

Rick Pomeroy, CMAC President

Friday, November 4th 9:00am – 3:00pm

CMAC Meeting Participants:

- Executive Committee
- Managing Directors Committee
- Board of Directors
- Chairs / Co-Chairs

CMAC VISION

"Assist the Construction Management Department in supporting the construction industry by developing consistently well-prepared and diverse graduates who have both superior technical and interpersonal skills to transform the construction industry."

8/9/2019

GENERAL CMAC BUSINESS

Rick Pomeroy, CMAC President
Jeong Woo, CM Department Head

CMAC COMMITTEES

DEVELOPMENT & FACILITIES

READ MORE

CURRICULUM & PROGRAMS

READ MORE

COMMUNITY OUTREACH

READ MORE

EVENTS & PROGRAMS

READ MORE

MEMBERSHIP & GROWTH

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YOUNG ALUMNI

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INTERDISCIPLINARY

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SPECIALTY CONTRACTORS

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CONSTRUCTION TECHNOLOGIES IN EDUCATION COMMITTEE (CTEC)

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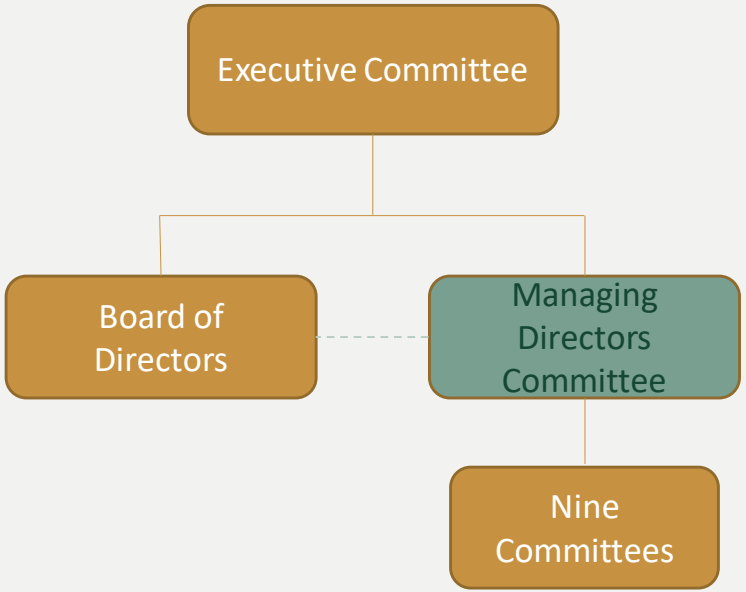
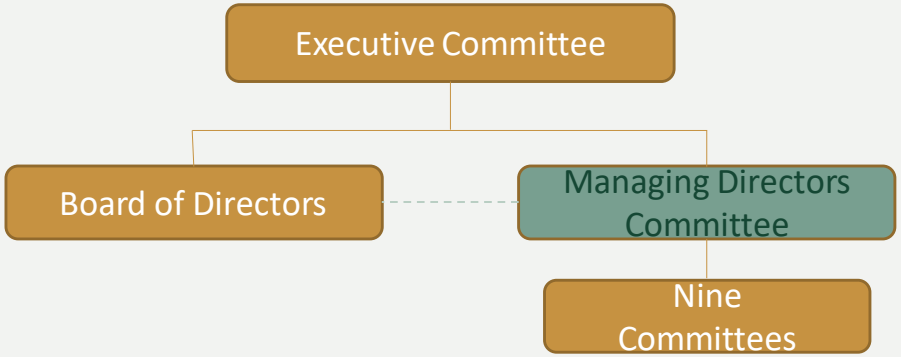
MANAGING DIRECTORS COMMITTEE

As of **May 2022**

The Ex Comm is in the process of restructuring the Managing Directors Committee based on discussions with the Committee Chair/Co-Chairs. The recommendations of the restructuring will be brought before the Board for discussion and voting at the Fall meeting.



MANAGING DIRECTORS COMMITTEE



As of **November 2022**

The Ex Comm recommends there will be 9 members of the Managing Directors Committee, plus two student representatives. These individuals will serve as a Chair for one of the 9 committees. Each Managing Director/Chair will elect a co-chair. The proposed Managing Directors Committee will serve from July 2022 – June 2024.

Action Step: Board Vote

MANAGING DIRECTORS COMMITTEE

July 2022 - June 2024	CMAC Committee	Managing Director	Co-Chair	Co-Chair
1	Community Outreach Committee	Bob Stephens		
2	Construction Technology	Shane Saltzgiver	Cory Keller	
3	Curriculum and Programs Committee	Rod Hammett	Ron Yen	
4	Development & Facilities Committee	Aaron Schlegel	Jeffrey Messana	
5	Events and Programs Committee	Jason Sommers	Reagan Milligan	Breanne Forster
6	Interdisciplinary Committee	Kyle Spitznagel	Charlie Mallers	
7	Membership and Growth Committee	Mike Schussel	Tami Williams	
8	Specialty Contractors Committee	A.J. Chamorro	Keenan Brekke	
9	Young Alumni Committee	Peter Riley		

NINE COMMITTEES

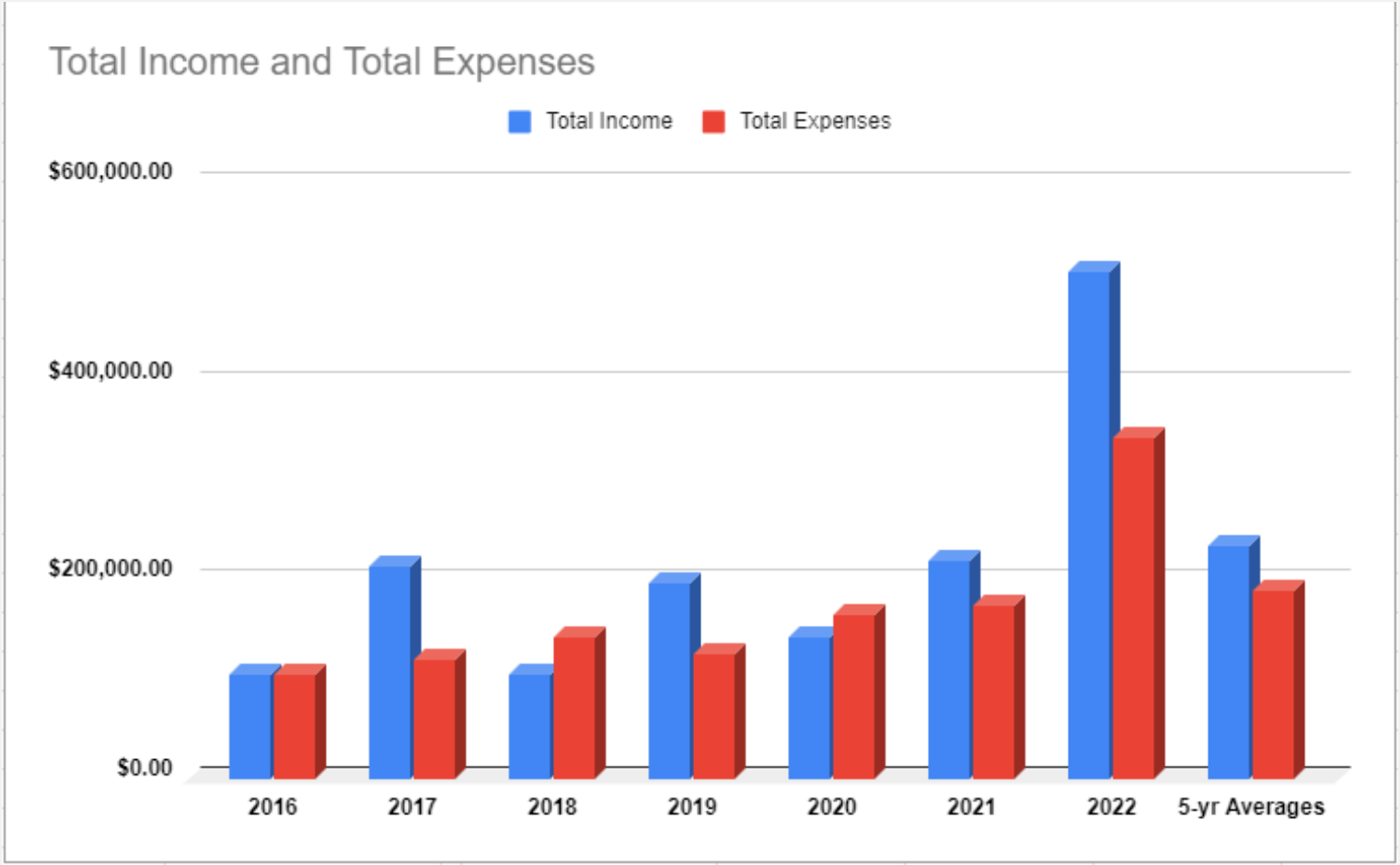
By-Laws changes approved by CMAC BOD 4/13/21

- Development & Facilities
- Curriculum and Programs
- Interdisciplinary
- Specialty Contractors
- Construction Technology
- Community Outreach
- Events & Programs
- Membership Growth
- Young Alumni

FINANCIALS FY2022

Revenues	
CMAC Memberships	**$290,128**
Mustang Membership	*$70,080*
Gold Membership	*$150,239*
Green Membership	*$60,151*
Individual Membership	*$9,635*
Recruiting Opportunities	**$136,056**
Info Session	*$16,616*
Meet and Greet	*$7,343*
Career Fair(s)	*$112,097*
Event Income (Special Events)	***$54,810***
Fee for Service (Special Activity Fees)	***$29,564***
Total Revenue	**$510,558**

Expenses	
Administrative Expenses	**-$149,358**
Salaries	*-$97,085*
Fringe Benefits	*-$34,829*
Other Administrative	*-$17,444*
Operating Expenses	**-$194,912**
CMAC Meetings	*-$4,979*
CMAC Mixers	*-$2,438*
Student Support	*-$41,389*
Travel	*-$9,092*
Web Services	*-$5,850*
Fee for Service Expenses (Special Activity)	*-$8,508*
Special Events Expenses (Special Events)	-$34,726
Career Fair(s) Expense	-$86,457
Miscellaneous Operating	*-$1,473*
Total Expenses	**-$344,271**


Total Income and Total Expenses
Total Income
Total Expenses
$600,000.00
$400,000.00
$200,000.00
$0.00
2016
2017
2018
2019
2020
2021
2022
5-yr Averages

CM DEPARTMENT NEEDS & DISCUSSION

DISCUSSION

- Review May's Discussion Notes

NEEDS

- Faculty In Residence Proposal
- CMAC Webinar Series Proposal
- Senior Project Support

BREAKOUT SESSION SUMMARY

Jeong Woo

CAL POLY

WHAT ARE THE WEAKNESSES OF CM GRADUATES?

Learn by doing a great but there are gaps/a lack of holistic approach in the method of education

Interpersonal relationships and softer skills are underdeveloped and need more focus

Poly is too focused on a direct CM path and is missing out on the opportunity to educate on other similar career paths such as preconstruction, map coordination, technology and operation of facility

INTERPERSONAL RELATIONSHIPS AND SOFT SKILLS DEVELOPMENT

- Different fundamentals of communication are used throughout CM
- Students are encouraged to get involved with organizations outside the classroom
- Faculty members are teaching their students about communication types through a variety of exercises
- Skills such as writing a proper email, leaving a proper voicemail and completing tasks on time (printing resumes) are critical
- Chapter 6 in Barb's book talks about values
- Jeong to present CM 443, 413, 102 contents at the next CMAC meeting
- 151 Quick Ideas to Improve your People Skills

CAL POLY SELF MY TEAM Learning Search

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BOOK

151 QUICK IDEAS TO IMPROVE YOUR PEOPLE SKILLS

Completion Status 0%

START

151 Quick Ideas to Improve Your People S...

DETAILS SIMILAR ACTIVITIES

Full Description

Culled from the study of human behavior, relationships, and communication, this guide offers tested and true ideas that will help you be more eff ective, efficient and in control of your relationships with people.

Schedule and Pricing

Additional Information

HOW TO INCLUDE NEW TOPICS SUCH AS PREFAB WITH A FLAVOR OF A HANDS-ON "LEARN BY DOING" APPROACH?

More faculty collaboration with industry would help introduce newer topics to the curriculum. Providing example submittals, new plan sets and more for the students would also help

Bring in guest speakers to 101 freshman classes to introduce them to the industry and current responsibilities they will face in industry

HOW TO ADD PREFAB IN CM?

Ray Boff, National Prefab Leader, DPR

https://youtu.be/-JZ0jrhB20s

- Manufacturing/factory mindset
- Resource leveling
- DFMA (Design for Manufacture and Assembly)
- VDC/generative Design
- Sustainability

INDUSTRIALIZED CONSTRUCTION CERTIFICATE

https://www.eventbrite.com/e/supply-chain-industrialized-construction-certificate-program-tickets-432088878467

INDUSTRIALIZED CONSTRUCTION

CERTIFICATE PROGRAM

PROJECT PRODUCTION INSTITUTE

CAL POLY

BASIC COURSES (LEVEL 1)	APPLICATION COURSES (LEVEL 2)	CAPSTONE PROJECT	SPECIALTY CERTIFICATE	PPM MASTER CERTIFICATE
TRACK 1 - Offsite Fabrication Done "Right"				
TRACK 2 - Supply Chain Done "Right"				PPM MASTER CERTIFICATE
TRACK 3 - Design for Offsite Fabrication Done "Right"				

Credentialing Healthcare Construction Workers for Public Protection

PCRA/ICRA Certificate Program

Coming in January

Training Host

CAL POLY
California Center for Construction Education

Credentialing

GREEN ADVANTAGE®

Accrediting Body

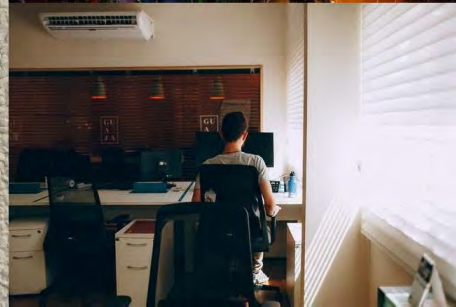
ANSI

Pre-construction Risk Assessment/
Infection Control Risk Assessment
(PCRA/ICRA) Credential

Why PCRA/ICRA Training and Credentialing?

Protection against disease transmission

Regulatory and Specification Compliance



PCRA/ICRA Training also covers other risks associated with. . .

- Noise Pollution
- Vibration
- Dust Migration
- Odor Containment
- Security of the facility
- Fire/Life Safety Systems
- Ventilation
- Utility systems
- Medical equipment
- Storing, transporting, and delivering supplies and materials
- Waste Management

Modules Covered

- **MODULE 1.** At war with pathogens, infection, and disease
- **MODULE 2.** Need for infection prevention and control
- **MODULE 3.** Infection and other risks in the Environment of Care
- **MODULE 4.** Construction risks in active healthcare settings
- **MODULE 5.** The Pre-Construction Risk Assessment Approach and Methods
- **MODULE 6.** Diving deep into PCRA/ICRA
- **MODULE 7.** Infection Control Risk Assessment
- **MODULE 8.** Life Safety Measures during construction
- **MODULE 9.** Construction best practices in healthcare settings: Preventing and controlling infection
- **MODULE 10.** Construction best practices in healthcare settings: Assuring optimal ventilation and pressurization
- **MODULE 11.** Construction best practices in healthcare settings: Assuring good air quality
- **MODULE 12.** Construction best practices in healthcare facilities: Maintaining water supply and quality
- **MODULE 13.** Construction best practices in healthcare facilities: Ensuring continuous service and preventing interruption of utilities
- **MODULE 14.** Construction best practices in healthcare facilities: Preventing noise and vibration exposures
- **MODULE 15.** Construction best practices in healthcare facilities: Maintaining compliance with emergency procedures
- **MODULE 16.** Construction best practices in healthcare settings: Using optimal work processes and procedures

PCRA/ICRA Certificate Next Steps

- Certificate Requirements
  - Attend 12 hours of Training
  - Pass the exam following the training (administered by GA)

- Exam Length/Format
  - 90 minute test time
  - 40 multiple-choice questions

- Fee
  - $650.00 per trainee
  - Two Days of In-person training
  - Training Manual
  - Exam Fees

- Term of Validity for Certificate
  - 5 years
  - Recertification (abbreviated course for re-examination)

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BIGGEST CHALLENGES

DIVERSITY AND INNOVATION

Jeong Woo

LEARN BY DOING
CAL POLY

THE "BIGGEST CHALLENGE"

INNOVATION

- Conversion to the semester system
- Develop a big picture of successful innovation in construction education
  - Interdisciplinary courses
  - Transfer-friendly
  - Innovative technologies

HOW TO ATTRACT GIFTED CM FACULTY?

- Support dedicated and gifted CM faculty who cultivate talents
- Recruit and retain the highest-quality faculty
- Invest in specific areas of study
- Inspire innovation and creative ideas
- Students learn from the real world of innovation and discovery

FACULTY AND STUDENT SUPPORT IDEAS

Jeong Woo

CAL POLY

PEER MENTORING FOR COM/TRANSFERS

Creating inclusive environments in the CM department

- Support transfer students so they can quickly get to know about CM
- Help them get involved right away– clubs, competitions, etc.
- Help them adjust socially and academically
- Provide the tools to handle the transition

How does it work?

- CCCE hires student mentors who can regularly meet with transfers

SENIOR PROJECT SUPPORT

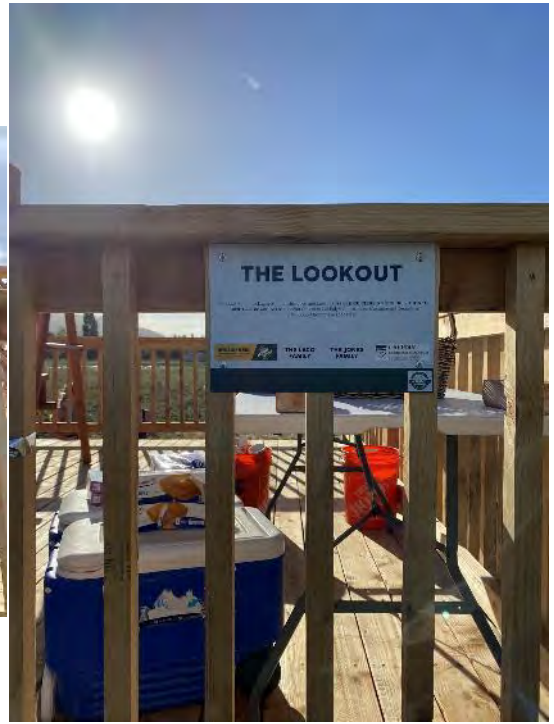
Support service projects for diverse communities

- Support projects helping communities with diverse ethnic and socioeconomical backgrounds
- Help them understand the role of construction professionals
- Understand the meaning of building our communities together

How does it work?

- Increase senior project support from 10K to 15K

THE LOOKOUT - SLO CITY FARM



FACULTY IN RESIDENCE

Hiring CM Faculty during Summer Months

- Support dedicated and gifted CM faculty who cultivate talents
- Recruit and retain the highest-quality faculty
- Inspire innovation and creative ideas and bring updated knowledge back to the classroom - Students learn from the real world of innovation

How does it work?

- Your company would hire an early-career CM faculty as an independent contractor
- CMAC supports moving/temporary housing expenses

CMAC WEBINAR SERIES

Creating webinars for CMAC members and students

- Develop a series of “lunch and learn” webinars for knowledge exchange
- Provide educational and networking opportunities to our membership free of charge
- Share recordings/presentation copies with CMAC members
- Use recordings in the classroom

How does it work?

- CMAC to select webinar topics
- Pair CM faculty with CMAC panels for each of the selected topics
- CM Faculty develop webinar materials with assistance from the panels
- Offer a $1,000 honorarium per course for CM faculty to develop and execute webinars

SEMESTER CONVERSION CONVERSATION

Joe Cleary, CM Department

Jeong Woo, CM Department Head

LUNCH BREAK

CMAC COMMITTEE GOALS

Brad Denney, CMAC Vice President

Rick Pomeroy, CMAC President

CMAC COMMITTEES

DEVELOPMENT & FACILITIES

READ MORE

CURRICULUM & PROGRAMS

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COMMUNITY OUTREACH

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EVENTS & PROGRAMS

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MEMBERSHIP & GROWTH

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YOUNG ALUMNI

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READ MORE

CMAC COMMITTEE REPORTS

DEVELOPMENT & FACILITIES

COMMITTEE VISION

The Development & Facilities Committee is a conduit to support the department financially to meet the needs beyond state funding, including addressing facility needs. This committee performs the following functions:

- Review initiatives and case statements related to private fundraising activities on behalf of the department and its students and make recommendations from the perspective of practitioners and alumni
- Assist in developing campaign statements, promote current funding initiatives and consider fundraising suggestions from students, faculty, and departmental and college administration.
- Report to the Board on such actions needed to promote the coals related to development and fundraising for the department

2-YEAR GOAL

- Assist the department in establishing scholarships for students and endowments for professors.
- Assist faculty in setting up project-based consulting with CMAC member organizations over the summer

DEVELOPMENT & FACILITIES

ROCK #1	STATUS	RESULTS
Establish an endowment for faculty	Ongoing – targeting funds to be in place for the 2023/2024 scholastic year	TBD

DEVELOPMENT & FACILITIES

ROCK #2	STATUS	RESULTS
Establish scholarship	Ongoing – targeting funds to be in place for the 2023/2024 scholastic year	TBD

CURRICULUM & PROGRAMS COMMITTEE

COMMITTEE VISION

ACT AS A CONDUIT FOR THE ENTIRE CMAC TO PROVIDE CONTINUING GUIDANCE TO THE CM DEPARTMENT ON THE 25 SLOS AND HOW TO BEST PREPARE STUDENTS FOR A SUCCESSFUL CAREER IN THE CONSTRUCTION INDUSTRY.

2-YEAR GOAL

- Develop and implement a process to get annual feedback from industry & recent alumni to CM faculty related to graduate preparedness.
- Develop and implement a process and format for a cross section of the faculty to use the committee as a resource for curriculum content changes and improvements.

COMMITTEE MEMBERS

Curriculum Committee

- Rod Hammett (Chair)
- Stacy Kolegraff (Faculty)
- Coleman Leslie
- Bob Kluball
- Thai Nguyen
- Matt Runyan
- Josh De Mattei
- Jeff Grimm
- Greg Simons
- Brittany Emmons
- Karen Orwig
- Corey Keller
- Greg Amon
- Enrique Ivers
- Mike Thompson
- Kraig O'Conner
- Peter Leonardi
- Alex Trujillo
- Ryan McCombs
- Tim Bolton
- Raymond Trebino
- Mike Messick
- Charles Muttillo

CURRICULUM COMMITTEE

ROCK #1	STATUS	RESULTS
Encourage CMAC involvement in year-end CM surveys	Provided input to CMAC EC for communication to CMAC members	Pending

CURRICULUM COMMITTEE

ROCK #2	STATUS	RESULTS
Complete Course Collaboration process for 2+ courses per year	No new requests from faculty in 2022	Pending

INTERDISCIPLINARY

DESCRIPTION

Support interdisciplinary education at Cal Poly by helping students develop a technical understanding of other disciplines, and empathy for other disciplines.

2-YEAR GOAL

- Support curriculum (technical understanding of other disciplines)
- Support connections / relationships (develop empathy for other disciplines)

COMMITTEE MEMBERS

- Kyle Spitznagel (Chair)
- Charlie Mallers (Co-Chair)
- Mark Montoya (Faculty)
- Mike Schussel

INTERDISCIPLINARY COMMITTEE

ROCK #2	STATUS	RESULTS
Meet and Greet Event in Conjunction with The Alliance and CAED.	Occurred on Oct 14th, 2022	Complete! With a huge thank you to the Alliance and their partners, Hathaway Dinwiddie, Largo Concrete, Quiring General, MATT, Bernards, BN Builders and Alliance student director Sam Wong, as well as many professors in the CAED.

MEET AND GREET RESULTS

70+ students, faculty, dept heads and Industry people at Milestone Tavern

CM, Architecture, ArcE, Landscape and some CRP.

Met the CRP Advisory Council to discuss future meetings.

Industry people, some from CMAC engaged the students and professors to discuss the importance of collaboration amongst the AEC industry partners.

Had representation of Architecture, Engineering, and Developers present.

Students would like to have more mixers to develop their network of potential friends from the other schools.

Plan more events like this, meet and greets with Industry.

INTERDISCIPLINARY COMMITTEE

ROCK #3	STATUS	RESULTS
Reach out to the clubs in the CAED to join the Alliance and CMAC assisting the students in networking with industry and each other in CAED. Utilize the Alliance Roundtables with Quiring General and Hathaway Dinwiddie.	New Rock – goal for this year	

SPECIALTY CONTRACTORS

DESCRIPTION

The Specialty Contractor subcommittee works with the faculty to increase specialty contractor exposure, and develop a better understanding of how specialty contractors operate for all students. Creating stronger deliberate partnerships between General and Specialty Contractors, the Subcommittee provides informative and interactive experiences for students, both in the classroom and through extracurricular activities.

2-YEAR GOAL

- Specialty Contractor presentations in classes to generate increased/earlier exposure for students
- Create a hands-on experience with material donations and demonstrations
- Utilize and support clubs/competitions to create interdisciplinary focus
- See and track graduate placement statistics
- Overarching Goal: Achieve a cultural shift. Advocate for General and Specialty Contractors as trade partners.

COMMITTEE MEMBERS

Specialty Contractor Sub-Committee

Chair: A.J. Chamorro
Co-Chair: Keenan Brekke

Members:
- Dom Cacciatore (Cupertino)
- Austn Eberle (Mcguire and Hester)
- Harrison Woods (Largo)
- Michael Ricks (Anning Johnson)
- Tom Kommer (CP Faculty)

SPECIALTY CONTRACTOR COMMITTEE

ROCK #1	STATUS	RESULTS
Presentations in Classes	Ongoing/Complete	SCSC Presentation Program alive and ongoing
ROCK #2 Hands on Experiences/Material Donations	In progress	- Beam forms for concrete design course - Pacific Structures Concrete Lab – Peer Review Complete / Precon Underway / Construction Starting Summer '23
ROCK #3 Utilize and Support Clubs and Competition Teams to Create Interdisciplinary Focus	Ongoing	Strong performance in Reno MAC Competition complete, no CM participation

CONSTRUCTION TECHNOLOGY IN EDUCATION COMMITTEE

COMMITTEE VISION

THE CTEC STRIVES TO HELP INTEGRATE EMERGING TECHNOLOGIES INTO THE CAL POLY CM CURRICULUM. OUR GROUP OF INDUSTRY PROFESSIONALS SERVES AS A RESOURCE TO AND CREATES MEANINGFUL CONNECTIONS WITH STUDENTS AND FACULTY INTERESTED IN FURTHERING THEIR EDUCATION IN AEC TECHNOLOGY.

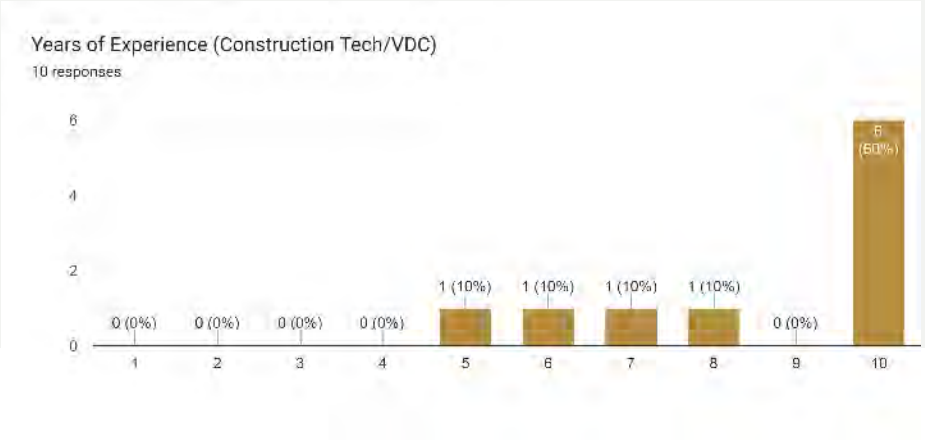
2-YEAR GOAL (AS OF 2020, UNDER REVIEW BY CURRENT COMMITTEE)

- AEC Tech Educational Conference
- Build tool for matching SMEs with Guest Lectures
- CTEC Fund
- Expand influence to all of CAED and CE
- Digitize CM 115
- Grow outreach of AEC Tech Survey

COMMITTEE MEMBERS

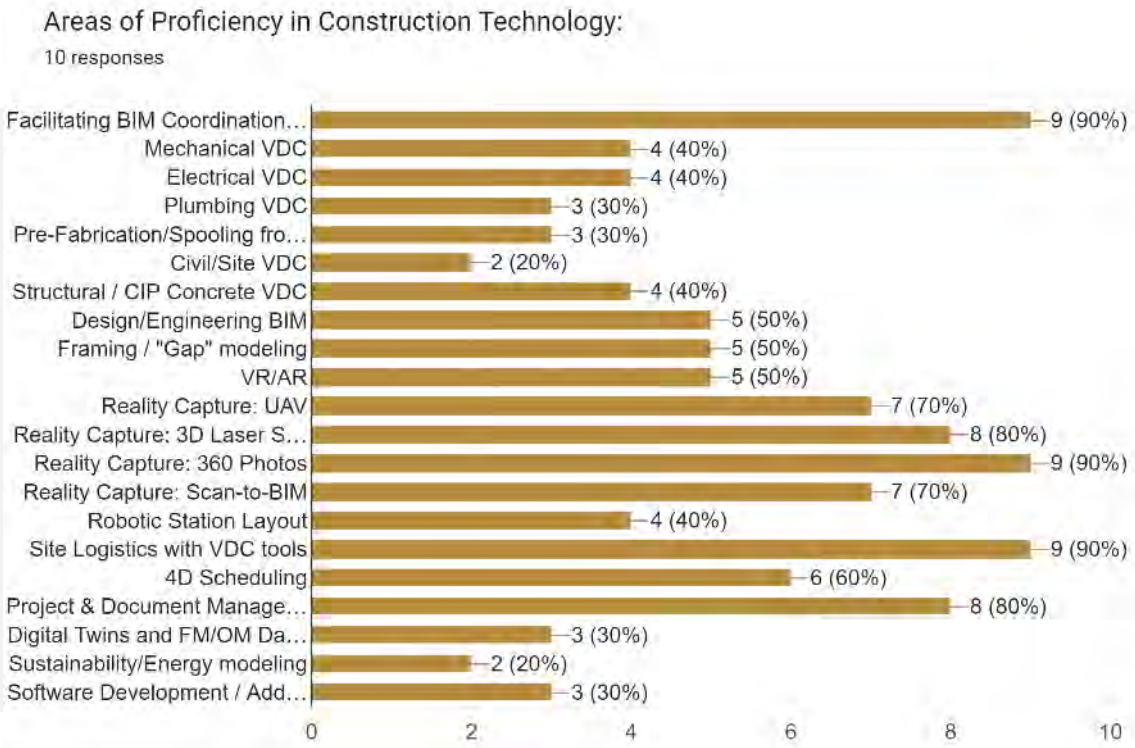
CTEC

Chair: Shane Saltzgiver, VEC
Co-Chair: TBD
Faculty Rep: Andrew Kline



Name	Company
Jeremy Futerman	Hathaway Dinwiddie
Taylor Gilmore	Mortenson
Matty Reed	n/a
Matthew Brady	Whiting-Turner
Mike Jakes	XL Construction
Kevin Williams	McCarthy Building Comp. Inc.
Trevor Houghton	McCarthy Holdings, Inc
Luis Esquivel	Hensel Phelps
Trey Garcia	Truebeck Construction
Justin Porter	Truebeck Construction

Committee Members - CTEC



CONSTRUCTION TECHNOLOGY IN EDUCATION COMMITTEE (CTEC)

ROCK #1

Increase CTEC membership and involvement

STATUS

- Survey sent Oct. 2022 to existing members and potential new members.
- Data collected about construction tech "expertise" and involvement interest
- Next Step: reach out to broader CMAC membership and increase CTEC members. Speak with CMAC Board about eligibility requirements.

RESULTS

- (11) confirmed member interest.
- Interest in being Guest Lecturers & to help connect the industry "why" to the curriculum "how" & "what"
- Interest in supporting ASC Comp. Teams and BIM club
- Desire to connect SME's with students/faculty for deeper engagement

CONSTRUCTION TECHNOLOGY IN EDUCATION COMMITTEE (CTEC)

ROCK #2

Re-evaluate "Rocks" for 2022/2023 and beyond and update 2-year goals, then get to work!

STATUS

- Initial discussion with Faculty Rep, Andrew Kline
- Started soliciting input from CM students about how they believe they could benefit the most from SME involvement
- Next Step: deeper conversation between CTEC, Faculty Rep. & other Faculty/ Students to refine ideas and develop plan

RESULTS

- Still a lot of work to do, no results to report yet

COMMUNITY OUTREACH

DESCRIPTION

The Community Outreach Committee is to engage and develop relationships with Community Colleges and High Schools, especially those with related technical programs, to promote the Construction Industry as a Profession and Cal Poly as the premier 4-year University for a Bachelor of Science Degree in Construction Management. This committee performs the following functions:

1. Develop strategies to increase Diversity and Inclusion in the Department
2. Identify outreach opportunities to high schools and community colleges to increase awareness of construction careers, especially for women, minorities and others underrepresented in our communities
3. Implement strategies in coordination with the Managing Directors Committee and the Department

2-YEAR GOAL

- Promote the goal of making the CM graduate representative of the Communities served by Cal Poly and the Construction Industry as a whole
- Increase awareness of programs that offer Public and Industry support to current and future CM students.

2020-2022 COMMITTEE MEMBERS

Community Outreach

Chair: Chris Forster – Bob Stephens
Co-Chair:
Executive Rep: Marcus Staniford
Faculty Rep: Bryan Knakiewicz – Cal Poly CM
Jeremy Tennison – Largo Concrete, Inc.
Lizette Galvez – PCL Construction
Tina Simmons – PCL Construction
David Eichten - Pankow
Kirk Wagerman – SC Builders
Alan Hanson – Simpson Strong-Tie, Inc.
Alan Laurlund – XL Construction
Jenna Carlson – Myers & Sons Construction, LP

COMMUNITY OUTREACH

ROCK #1

Gather Data

STATUS

Committee needs updated statistics on student demographics in the CM program

RESULTS

Some demographic data for students to form baselines, will gather more as this changes annually

Committee to ***update*** data, Current Students, Alumni, interdisciplinary studies, Clubs, Scholarships, etc.

COMMUNITY OUTREACH

ROCK #2

Develop Content

STATUS

Ongoing

need ***updated*** pictures of Summer PE Interns, Carpenter Apprentice Interns

RESULTS

Continue one page (elevator speech) why CM, outlined content to be included in handout to be given to potential students

Highlights of program, financial opportunities, scholarships, clubs, senior projects, Income data, data base of pictures to be used for outreach

EVENTS & PROGRAMS

DESCRIPTION

Provide opportunities for alumni to build strong community that enhances our industry and Cal Poly.

2-YEAR GOALS

- Develop events to educate students and raise awareness of the benefits of CMAC.
- Add student representation to our committee meetings.
- Organize and lead cross committee event collaboration.
- Continue our partnership with the Carpenters Union & produce an event focused on the Carpenter Apprenticeship Internship.

COMMITTEE MEMBERS

Chair: Jason Sommers (Cahill)
Co-Chair (Nor-Cal): Reagan Milligan (Blach)
Co-Chair (So-Cal): Breanne Forster (Turner)

Faculty Members: Rachell Smith & Scott Kelting

Industry Members: Karri Novak (Suffolk), Sarah Pisani (Blach), Ron Yen (Build Group), Bill Johal (Kitchell), Chris Pedroza (Carpenters), Abbie Lucero (Kiewit), Matt Smart (Lend Lease), Matt Caswell (Skanska), Jeff Hadley (Hadley), Shaina Suanico (Rudolf & Sletten), David Mulder (Sprig), Marissa Anderson (Sundt)

EVENTS & PROGRAMS

SUMMER/FALL 2022 ROCKS

ROCK#1	STATUS	RESULTS
Partner with the NorCal Carpenters Union on another mixer event for the Carpenter Apprenticeship Internship program. Increase our engagement and attendance relative to last year.	EXECUTED	Need to update w/ actuals for engagement statistics.

EVENTS & PROGRAMS

WINTER/SPRING 2023 ROCKS

ROCK#1	STATUS	RESULTS
Re-engage Committee, conduct two Committee Meetings (preferably one in person), and update our Committee 2-year Goals.	To be scheduled.	

MEMBERSHIP & GROWTH

DESCRIPTION

Advertise and promote membership in the CMAC among interested and eligible entities and individuals – especially current graduates and recently graduated alumni – with an alignment between inclusion and organizational scalability.

2-YEAR GOAL

- Focus on Individual Memberships

COMMITTEE MEMBERS

Co-Chair: Mike Schussel
Co-Chair: Tami Williams
Faculty Rep: Andrew Kline
Member: Brett Mullinax
Member: Kent Adams
Member: Shane McCullough
Member: Carl Vizcarra
Member: Bruce Daseking

MEMBERSHIP & GROWTH

ROCK #1	STATUS	RESULTS
Achieve 200 Individual Memberships.	We currently have 45 Individual Members. Schedule CM460 Info Session for Fall 2022 Make CMAC sign up for senior a class assignment for CM460	In Process

MEMBERSHIP & GROWTH

ROCK #2	STATUS	RESULTS
Review Individual Membership structure to promote increased membership especially with recent graduates.	M&G committee to review prior to Spring 2023 CMAC meeting.	In process

YOUNG ALUMNI

DESCRIPTION

Recruit graduating students and engage them in CMAC as well as provide support and mentorship for young alumni.

1-YEAR GOAL

- Increase size of Young Alumni Committee.
- Organize events with recent graduates who have joined CMAC to maintain interest in CMAC post-graduation.

2-YEAR GOAL

- Along with the help of the Events & Programs committee, further develop and grow a mentorship program for young alumni.

COMMITTEE MEMBERS

Chair: Peter Riley – Truebeck Construction

Co-Chair: TBD

Faculty Rep: Jeong Woo

Kristen Forster – PCL Construction

Ally Forster – PCL Construction

Patrick Shami – Swinerton Builders

Marco Maffioli – Truebeck Construction

Brittney Lerdahl – DPR Construction

Marlo Castro – DPR Construction

YOUNG ALUMNI

ROCK #1	STATUS	RESULTS
Increase size of Young Alumni Committee within CMAC.	In Progress - Requesting list of new graduates who joined CMAC from Membership & Growth Committee. Planning to reach out to these members for interest in the committee.	TBD

YOUNG ALUMNI

ROCK #2	STATUS	RESULTS
Organize events with recent graduates who have joined CMAC to maintain interest in CMAC post-graduation.	In Progress – Working on casual happy hour meet ups to occur a couple times during the year in SF and LA.	TBD

YOUNG ALUMNI

ROCK #3	STATUS	RESULTS
Continue development of CMAC mentorship Program alongside Events & Programs committee. 1) CMAC Young Alumni mentoring students. 2) Senior CMAC Members mentoring CMAC Young Alumni.	Open – mild success with pilot mentorship program. We would like to brainstorm during the breakout session better ways to provide a mentorship program between CMAC members as well as with students.	TBD

CMAC COMMITTEE RECAP & NEXT STEPS

- We need to focus on a SINGLE PRIORITY Rock to be completed by the Spring Meeting: June 9th 2023?
- Quarters to Semesters Transition Opportunities

CM DEPARTMENT UPDATE

Jeong Woo

CAL POLY

ENROLLMENT UPDATES - 2022

Freshmen - 99

Male - 80

Female students - 18

Transfer students - 8

Graduates in 2022-2023

130+ students are expected to graduate in 2022-2023

Change of Major in 2021-2022

There are 34 students who were transferred from other majors at Cal Poly

107
INCOMING CM MAJORS

131+
EXPECTED GRADUATES

590+
CM MAJORS

80+
CM MINORS

		Fall 2016	Fall 2017	Fall 2018	Fall 2019	Fall 2020	Fall 2021
All Students	Headcount	92	99	97	103	110	98
GENDER:							
Men	Headcount	83	74	71	86	90	79
	Percent	90.2%	74.7%	73.2%	83.5%	81.8%	80.6%
Women	Headcount	9	25	26	17	20	19
	Percent	9.8%	25.3%	26.8%	16.5%	18.2%	19.4%
ETHNIC GROUPING:							
Under Represented Minorities	Headcount	21	34	18	23	21	26
	Percent	22.8%	34.3%	18.6%	22.3%	19.1%	26.5%
Non-Under Represented Minorities	Headcount	71	65	79	80	89	72
	Percent	77.2%	65.7%	81.4%	77.7%	80.9%	73.5%

		Fall 2016	Fall 2017	Fall 2018	Fall 2019	Fall 2020	Fall 2021
Total Students		92	99	97	103	110	98
MCA Academic Score	N	92	99	96	102	110	98
	Average	4059	4144	4157	4162	4253	4366
High School GPA	N	92	97	95	101	105	97
	Average	3.72	3.80	3.76	3.83	3.91	3.84

CMAC MIXERS

Jeong Woo

CAL POLY

SACRAMENTO MIXER - MYERS & SONS

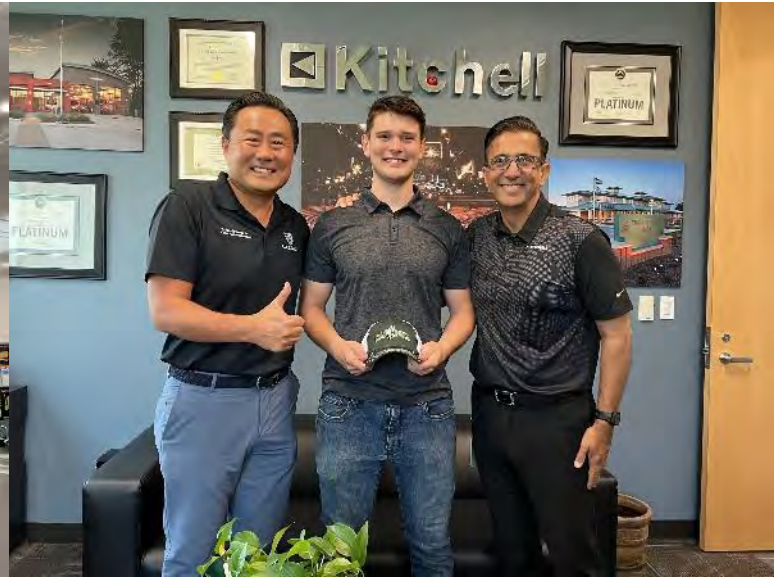
FRESNO MIXER - QUIRING GENERAL

SD MIXER - DPR

LA MIXER – LARGO CONCRETE

CLIPPERS STADIUM SITE TOUR

CAED HONORED ALUMNA – SUE ROZAKIS


Kitchell
PLATINUM
PLATINUM

FACILITY UPDATES

Jeong Woo

CAL POLY

STUDENT LOUNGE AND COLLABORATION LAB

De Mattei Lab

AS OF 11/2/2022

CLASSROOM UPGRADES

RECRUITING EVENTS

Jeong Woo

LEARN BY DOING
CAL POLY

CAL POLY FALL 2022 CONSTRUCTION MANAGEMENT CAREER FAIR RESULTS

ATTENDING STUDENT MAJORS

- CONSTRUCTION MANAGEMENT
- CIVIL & MECHANICAL ENGINEERING
- ARCHITECTURE
- BUSINESS & OTHER

GENERAL EXPERIENCE: 4.66 AVERAGE RATING

ATTENDANCE

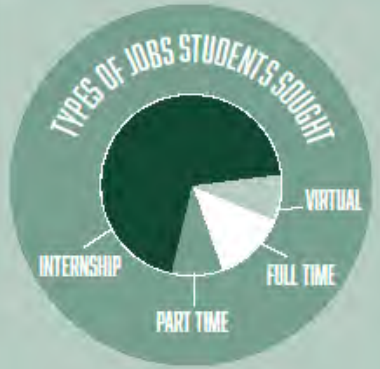
TOTAL

650+

AVERAGE FOR STUDENTS PER DAY

300+

"I LOVE THIS MAJOR! NICE JOB CCCE & CAL POLY CM."



STUDENT ATTENDANCE BY YEAR

- FIRST YEAR
- SECOND YEAR
- THIRD YEAR
- FOURTH YEAR
- FIFTH YEAR

STUDENT TOP REASONS FOR ATTENDING

1. TO INTERVIEW FOR JOB OPPURTUNITIES
2. TO NETWORK WITH CM COMPANIES
3. TO RESEARCH INTERNSHIPS & FULL-TIME JOBS

"I LIKED THE TWO DAY SET UP. GREAT TO BE IN PERSON!"

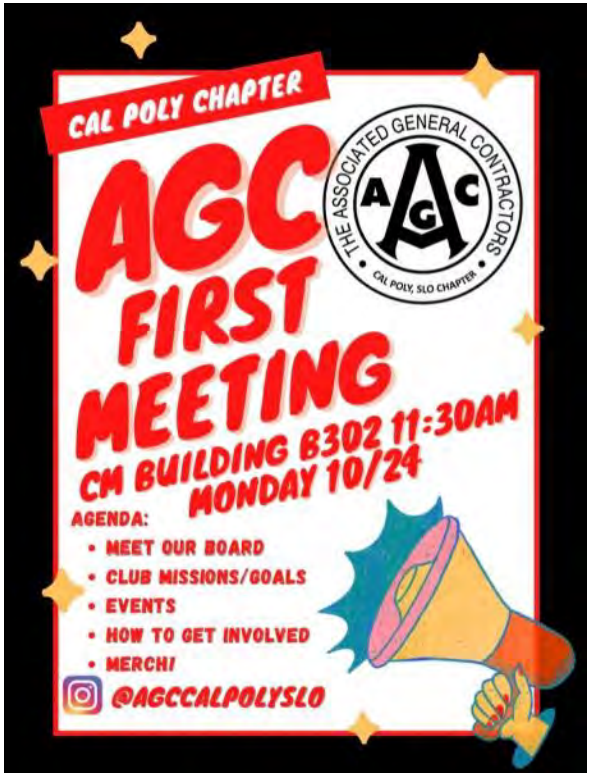

WHAT WE DO
HOW WE DO IT


MEMBERS OF THE
2022
CMAC
2023
CONSTRUCTION MANAGEMENT ADVISORY COUNCIL
FOUNDER MEMBERSHIP
LEGACY MEMBERSHIP
MUSTANG MEMBERSHIP
GOLD MEMBERSHIP
GREEN MEMBERSHIP


FLINT


CONSTRUCTION MANAGEMENT
CAL POLY


EXIT


CAL POLY CHAPTER
AGC
FIRST
MEETING
THE ASSOCIATED GENERAL CONTRACTORS
CAL POLY, SLO CHAPTER
CM BUILDING B302 11:30AM
MONDAY 10/24
AGENDA:
• MEET OUR BOARD
• CLUB MISSIONS/GOALS
• EVENTS
• HOW TO GET INVOLVED
• MERCH!
@AGCCALPOLYSLO


Women in
Construction
Resume
Workshop
DETAILS
DATE
Tuesday, October 25th
TIME
6:30pm
LOCATION
Building 186 Room B202
WHAT'S FOR DINNER?
Chipotle!
Join Blach Construction to prepare your resume ahead of the fall career fair.
ENJOY DINNER ON US!

NEW PROGRAMS

Jeong Woo

CAL POLY

RENEWABLE ENERGY INITIATIVES

GIRL'S BUILD ACADEMY

50TH ANNIVERSARY

Jeong Woo

CAL POLY


FIRST PLACE TEAM
1st Annual CM Competiti
January 1988
CAL POLY


CONSTRUCTION
MANAGEMENT
CAL POLY
CONSTRUCTION
MANAGEMENT
CAL POLY
CONSTRUCTION
MANAGEMENT
CAL POLY

STUDENT SUCCESSES

COMPETITION RESULTS

CARPENTER APPRENTICESHIP

NOTABLE STUDENT PROJECT

CLUB ACTIVITIES

CM FRESHMEN WELCOME BBQ

SENIOR BANQUET

SPRING GRADUATION

CLASS OF 2022

ASC Competition

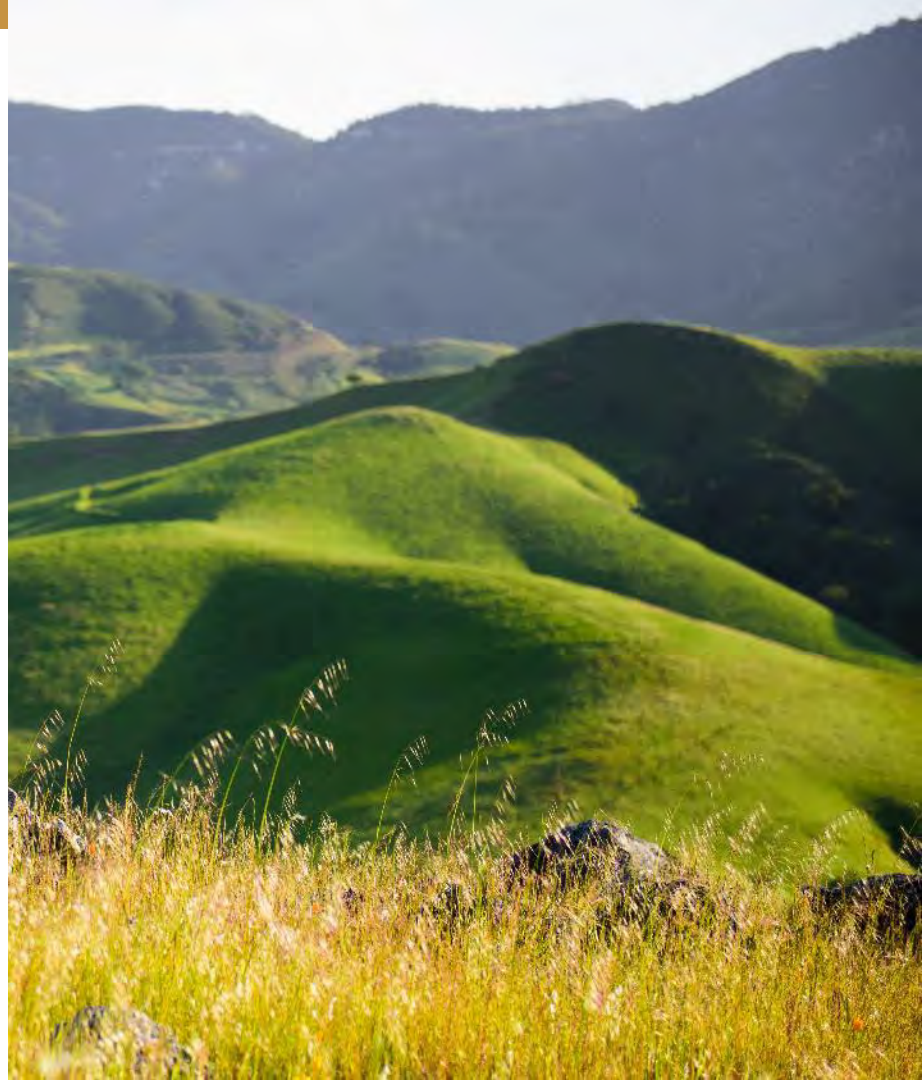
Region 3

ASC Region 3 National Open Competition

Concrete

Electrical

Preconstruction

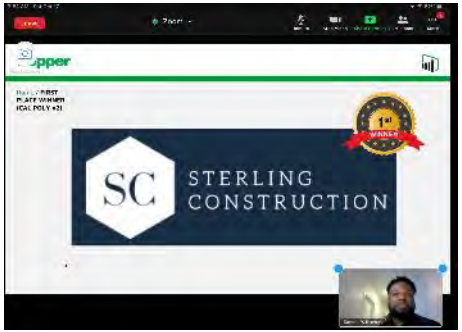


TAKING EXAM DURING SITE TOUR

PRECONSTRUCTION CHAMPIONS

Four-peat!

2019



2020

2021

2022

ELECTRICAL CHAMPIONS

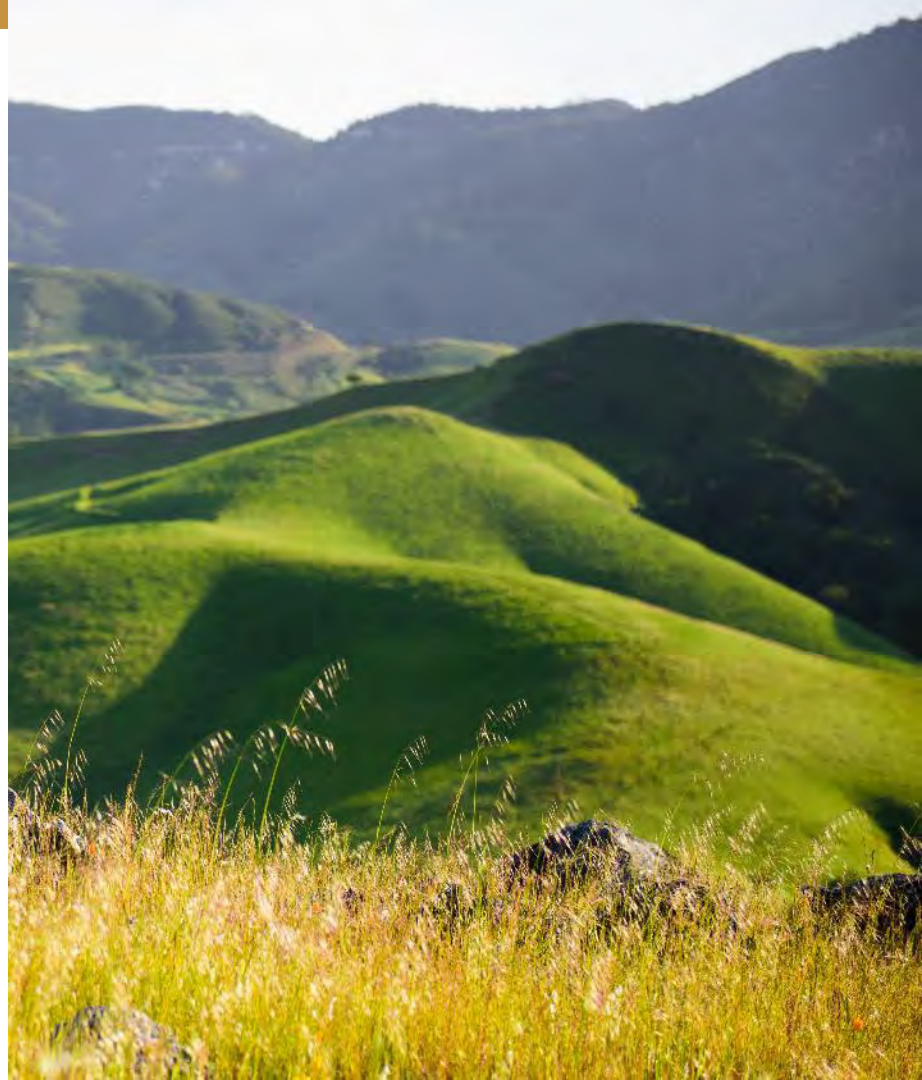
Competition Sponsors

ANNING-JOHNSON COMPANY

Pacific Structures BUILDGROUP INC

PRIME ELECTRIC

DPR CONSTRUCTION



Carpenter's Apprenticeship

Started program8 years ago with 6 students in Northern CA; now 30 students in Northern & Southern CA

CARPENTER'S APPRENTICESHIP CELEBRATION

DAVE ECONOMOS

BEN CARTER

https://youtu.be/lXWZIAFVR6c

CAL POLY SCHOLAR

Bryan Cruz

SAVE THE DATE

ALL HANDS CMAC MEETING

- Friday, June 9th 2023

CM SR. BANQUET

- Friday, June 9th 2023

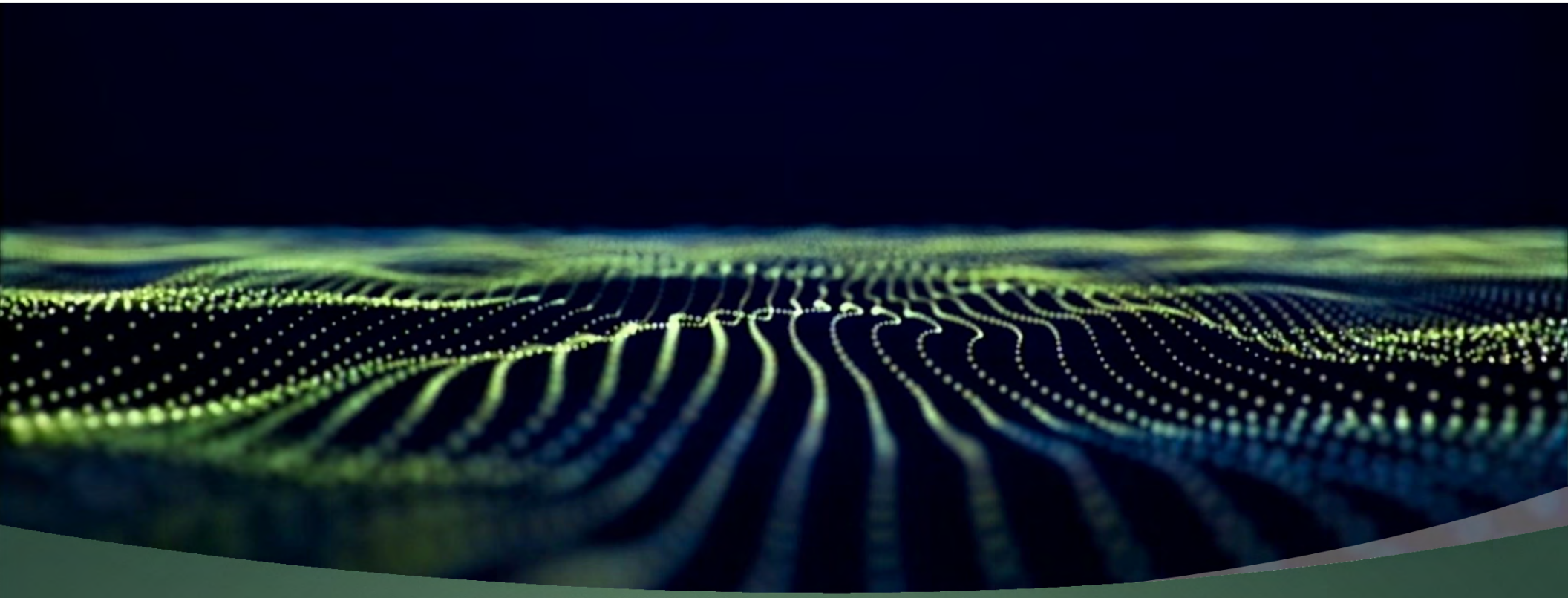
ASCM GOLF TOURNAMENT

- Saturday, June 10th 2023

THANK YOU

CMAC

CONSTRUCTION MANAGEMENT
ADVISORY COUNCIL



CM Semester Conversion

FALL CONFERENCE WORKING SESSION

Construction Management Department Mission:

- **The Cal Poly Construction Management Program builds innovative leaders in the construction industry by integrating technical knowledge, engaging in lifelong learning, and solving problems as highly effective managers through communication and collaboration.**

Construction Management Department 7 Goals:

1. Enhance the **Success of all CM students**
2. Cultivate the **Excellence of All CM Employees**
3. Enrich the **Culture of Diversity, Equity and Inclusion** within the Construction Management Department
4. Enhance the **Breadth of the Construction Management Academic Programs**

Construction Management Department 7 Goals:

5. Create an **Engaged, Vibrant and Healthy Community** for and through Construction Management Students

6. Revolutionize the way CM students **access and utilize technologies to become innovative leaders in the industry**

7. Secure and Enhance the Future of the CM Department by Improving **Finances, Facilities, and Resources**

CM Department 25 Program Learning Outcomes (PLOs):

PLO 1: Create written communications appropriate to the construction discipline.

PLO 2: Create oral presentations appropriate to the construction discipline.

PLO 3: Create a construction project safety plan.

PLO 4: Create construction project cost estimates.

PLO 5: Create construction project schedules.

CM Department 25 Program Learning Outcomes (PLO)s:

PLO 6: Analyze professional decisions based on ethical principles.

PLO 7: Analyze construction documents for planning and management of construction processes.

PLO 8: Analyze methods, materials, and equipment used to construct projects.

PLO 9: Apply construction management skills as a member of a multi-disciplinary team.

PLO 10: Apply electronic-based technology to manage the construction process.

CM Department 25 Program Learning Outcomes (PLO)s:

PLO 11: Apply basic surveying techniques for construction layout and control.

PLO 12: Understand different methods of project delivery and the roles and responsibilities of all constituencies involve in the design and construction process.

PLO 13: Understand construction risk management.

PLO 14: Understand construction accounting and cost control.

PLO 15: Understand construction quality assurance and control.

CM Department 25 Program Learning Outcomes (PLO)s:

PLO 16: Understand construction project control processes.

PLO 17: Understand the legal implications of contract, common, and regulatory law to manage a construction project.

PLO 18: Understand the basic principles of sustainable construction.

PLO 19: Understand the basic principles of structural behavior.

PLO 20: Understand the basic principles of mechanical, electrical and plumbing systems.

CM Department 25 Program Learning Outcomes (PLO)s:

PLO 21: Understand the role construction managers play in enhancing the needs of society.

PLO 22: Understand the importance of creating and planning for continuing education and Lifelong Learning.

PLO 23: Understand the key leadership characteristics that are successful in building and strengthening construction management teams.

PLO 24: Understand the importance of recognizing culture differences and role culture plays on influencing project success for a construction team.

PLO 25: Understand the benefits of respecting the unique and diverse backgrounds individuals bring to a construction team.

CAED 8 Semester Conversion Goals:

- Promote Interdisciplinary educational opportunities
- Sustain the curricular variety and intensity that is a hallmark of the quarter system
- Improve ease of change of major within and into the CAED
- Improve ease of transfer into CAED programs

CAED 8 Semester Conversion Goals (cont'd):

- Incorporate curricular goals of the CAED diversity plan
- Increase CAED contributions to Cal Poly General Education
- Expand graduate programs and integrate them into educational pathways
- Leverage and share CAED resources more effectively

CM Semester Conversion Goal:

- **Our mission continues to drive us through the directed academic calendar conversion**

CM Semester Conversion Goal:

- **Even though the annual academic schedule is changing the CM department will continue to deliver the same innovative, high-quality student-centered world-class learn by doing education it has become known for, preparing students ready to lead and meet the needs of the Construction Industry on day one.**

Semester Conversion University Schedule Deadlines:

- Step 1 – Develop Semester Flowchart

  January 27, 2022

- Step 2 – Revise/develop course proposals (CLOs)

  May 2023

- Step 3 – Implement the plan

  Fall 2026

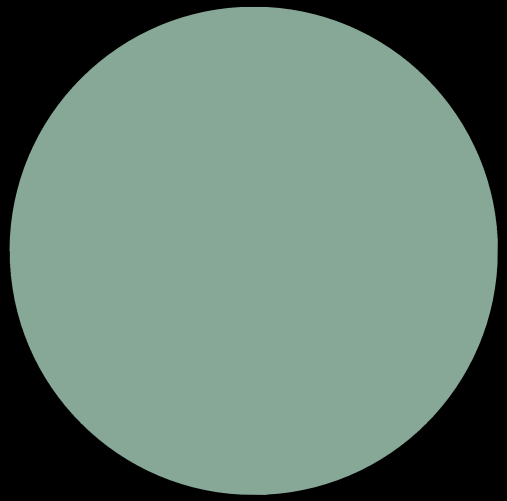
Semester Conversion Step 1 Schedule:

- Phase 1 – Faculty Input: June - September
- Phase 2 – Industry Input: November
- Phase 3 – Student Input: November
- Phase 4 – Coordinated Draft: December
- Phase 5 – Curriculum Committee Approval: January
- Phase 6 – CM Faculty Approval: January 19, 2023
- Submission deadline: January 27, 2023

Semester Conversion Constraints:

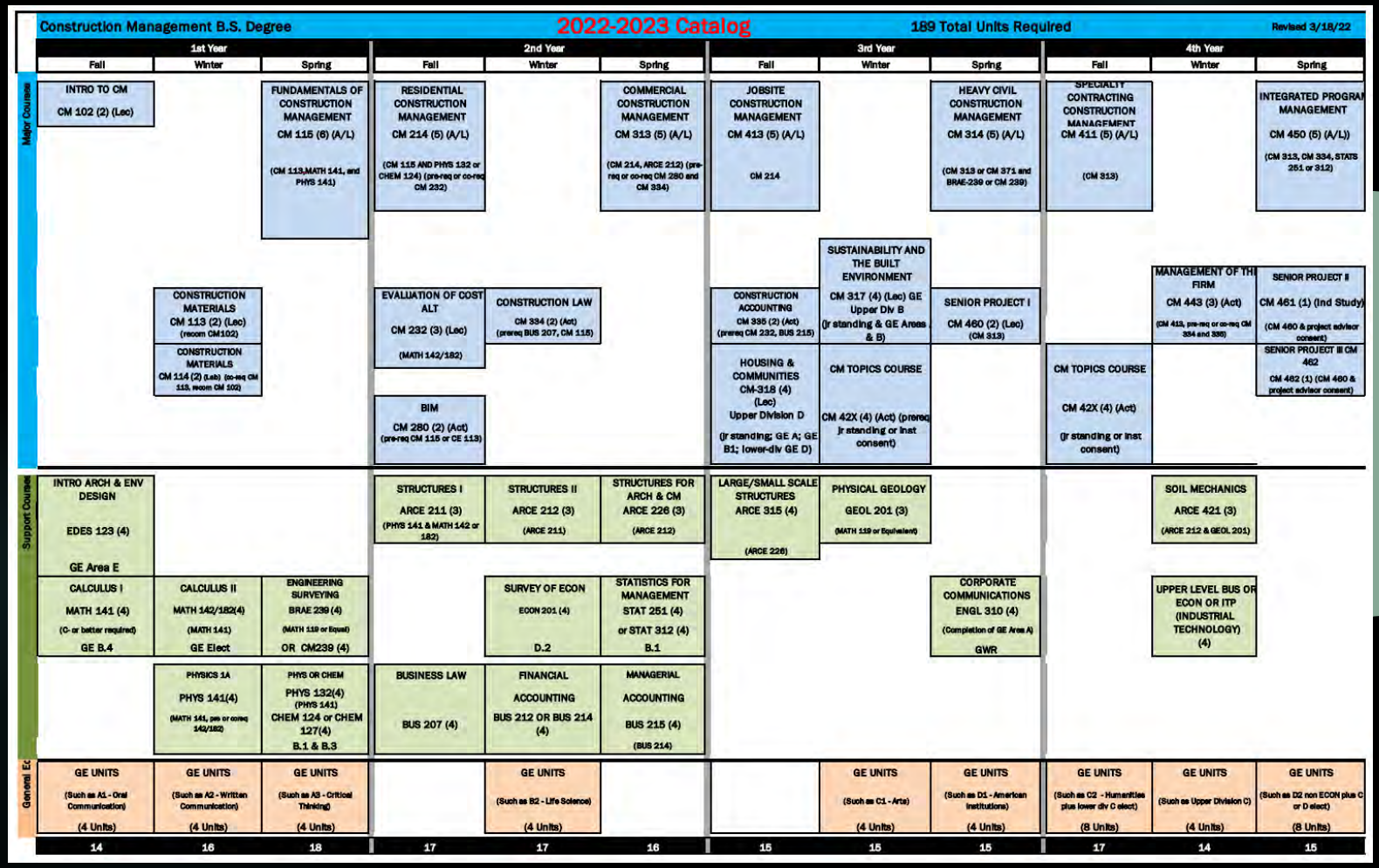
Required:

- AB 928 (GE Pathway)
- CSU (Directive to Semesters)
- Cal Poly/Academic Senate/CAED
- CFA
- ACCE



Recommended:

- CMAC
- Students


Construction Management B.S. Degree
2022-2023 Catalog
189 Total Units Required
Revised 3/18/22
1st Year
2nd Year
3rd Year
4th Year
Fall
Winter
Spring
Major Courses
INTRO TO CM
CM 102 (2) (Lec)
FUNDAMENTALS OF CONSTRUCTION MANAGEMENT
CM 115 (6) (A/L)
(CM 113,MATH 141, and PHYS 141)
RESIDENTIAL CONSTRUCTION MANAGEMENT
CM 214 (5) (A/L)
(CM 115 AND PHYS 132 or CHEM 124) (pre-req or co-req CM 232)
COMMERCIAL CONSTRUCTION MANAGEMENT
CM 313 (5) (A/L)
(CM 214, ARCE 212) (pre-req or co-req CM 280 and CM 334)
JOBSITE CONSTRUCTION MANAGEMENT
CM 413 (5) (A/L)
CM 214
HEAVY CIVIL CONSTRUCTION MANAGEMENT
CM 314 (5) (A/L)
(CM 313 or CM 371 and BRAE-239 or CM 239)
SPECIALTY CONTRACTING CONSTRUCTION MANAGEMENT
CM 411 (5) (A/L)
(CM 313)
INTEGRATED PROGRAM MANAGEMENT
CM 450 (5) (A/L))
(CM 313, CM 334, STATS 251 or 312)
CONSTRUCTION MATERIALS
CM 113 (2) (Lec)
(recom CM102)
CONSTRUCTION MATERIALS
CM 114 (2) (Lab) (co-req CM 113, recom CM 102)
EVALUATION OF COST ALT
CM 232 (3) (Lec)
(MATH 142/182)
BIM
CM 280 (2) (Act)
(pre-req CM 115 or CE 113)
CONSTRUCTION LAW
CM 334 (2) (Act)
(prereq BUS 207, CM 115)
CONSTRUCTION ACCOUNTING
CM 335 (2) (Act)
(prereq CM 232, BUS 215)
HOUSING & COMMUNITIES CM-318 (4) (Lec)
Upper Division D
(jr standing; GE A; GE B1; lower-div GE D)
SUSTAINABILITY AND THE BUILT ENVIRONMENT
CM 317 (4) (Lec) GE Upper Div B
(jr standing & GE Areas A & B)
CM TOPICS COURSE
CM 42X (4) (Act) (prereq jr standing or inst consent)
SENIOR PROJECT I
CM 460 (2) (Lec)
(CM 313)
MANAGEMENT OF THE FIRM
CM 443 (3) (Act)
(CM 413, pre-req or co-req CM 334 and 336)
SENIOR PROJECT II
CM 461 (1) (Ind Study)
(CM 460 & project advisor consent)
CM TOPICS COURSE
CM 42X (4) (Act)
(jr standing or inst consent)
SENIOR PROJECT III CM 462
CM 462 (1) (CM 460 & project advisor consent)
Support Courses
INTRO ARCH & ENV DESIGN
EDES 123 (4)
GE Area E
STRUCTURES I
ARCE 211 (3)
(PHYS 141 & MATH 142 or 182)
STRUCTURES II
ARCE 212 (3)
(ARCE 211)
STRUCTURES FOR ARCH & CM
ARCE 226 (3)
(ARCE 212)
LARGE/SMALL SCALE STRUCTURES
ARCE 315 (4)
(ARCE 226)
PHYSICAL GEOLOGY
GEOL 201 (3)
(MATH 119 or Equivalent)
SOIL MECHANICS
ARCE 421 (3)
(ARCE 212 & GEOL 201)
CALCULUS I
MATH 141 (4)
(C- or better required)
GE B.4
CALCULUS II
MATH 142/182(4)
(MATH 141)
GE Elect
ENGINEERING SURVEYING
BRAE 239 (4)
(MATH 119 or Equal)
OR CM239 (4)
SURVEY OF ECON
ECON 201 (4)
D.2
STATISTICS FOR MANAGEMENT
STAT 251 (4)
or STAT 312 (4)
B.1
CORPORATE COMMUNICATIONS
ENGL 310 (4)
(Completion of GE Area A)
GWR
UPPER LEVEL BUS OR ECON OR ITP (INDUSTRIAL TECHNOLOGY) (4)
PHYSICS 1A
PHYS 141(4)
(MATH 141, pre or coreq 142/182)
PHYS OR CHEM
PHYS 132(4)
(PHYS 141)
CHEM 124 or CHEM 127(4)
B.1 & B.3
BUSINESS LAW
BUS 207 (4)
FINANCIAL ACCOUNTING
BUS 212 OR BUS 214 (4)
MANAGERIAL ACCOUNTING
BUS 215 (4)
(BUS 214)
General Ed
GE UNITS
(Such as A1 - Oral Communication)
(4 Units)
GE UNITS
(Such as A2 - Written Communication)
(4 Units)
GE UNITS
(Such as A3 - Critical Thinking)
(4 Units)
GE UNITS
(Such as B2 - Life Science)
(4 Units)
GE UNITS
(Such as C1 - Arts)
(4 Units)
GE UNITS
(Such as D1 - American Institutions)
(4 Units)
GE UNITS
(Such as C2 - Humanities plus lower div C elect)
(8 Units)
GE UNITS
(Such as Upper Division C)
(4 Units)
GE UNITS
(Such as D2 non ECON plus C or D elect)
(8 Units)
14
16
18
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14
15

Semester Conversion Numbers:

Quarter Units Required to Graduate:

- Cal Poly - 180
- CM - 189

Semester Hours Required to Graduate:

- CSU/Cal Poly - 120
- CM - TBD (proposed 126)

Course Formats **per unit** (1 meeting hour = 50min):

Quarter Unit:

- 10 week quarter
- 1 quarter unit = 10 meeting hours/ quarter
- 4 quarter unit lecture = 40 meeting hours/quarter

Semester Hour:

- 15 week semester
- 1 semester hour = 15 meeting hours/semester
- 3 semester hour lecture = 45 meeting hours/semester

Typical GE 4 QU to 3 SH

Semester Conversion GE Requirements (46 hours):

46 Semester Hours:

- 14 courses
- 42 semester hours
- +4 (or 5) semester hours (calc & phys)

CAL POLY

QU = Quarter Units
SH = Semester Hours

TEMPLATE FOR GENERAL EDUCATION 2020

for students on AY 2021-2022 and subsequent catalogs

The Standard GE Template has the following distribution of courses:

		QU	SH	
Area A: English Language Communication and Critical Thinking				
A1	Oral Communication	4	3	
A2	Written Communication	4	3	
A3	Critical Thinking	4	3	
	Total Units in Area A	**12**	**9**	
Area B: Scientific Inquiry and Quantitative Reasoning				
B1	Physical Science	4	5	
B2	Life Science	4	3	
B3	Laboratory Activity	in B1 or B2		
B4	Mathematics/Quantitative Reasoning	4	5	
Upper-Division B		4	3	- CM 317
	Total Units in Area B	**16**	**16**	
Area C: Arts and Humanities *Lower-division courses in Area C must come from three different prefixes.*				
C1	Arts: Arts, Cinema, Dance, Music, Theater	4	3	
C2	Humanities: Literature, Philosophy, Languages other than English	4	3	
~~Lower-Division C Elective – *Select a course from either C1 or C2*~~		~~4~~		
Upper-Division C		4	3	
	Total Units in Area C	**16**	**9**	
Area D: Social Sciences *Courses in Area D must come from at least two different prefixes.*				
D1	American Institutions (Title 5, Section 40404 Requirement)	4	3	
D2	Lower-Division D	4	3	
Upper-Division D		4	3	- CM 318
	Total Units in Area D	**12**	**9**	
Area E: Lifelong Learning and Self-Development				
~~Lower-Division E~~		~~4~~		
	Total Units in Area E	**4**		
Area F: Ethnic Studies				
Area F		4	3	
	Total Units in Area F	**4**	**3**	
GE Electives in Area B, C, and D				
~~GE Electives – *Select courses from two different areas; courses may be at either lower- or upper-division levels.*~~		~~8~~		
	Total Units in GE Electives	**8**		
	TOTAL UNITS IN GENERAL EDUCATION PROGRAM	**72**	**46**	

Semester Conversion Non-GE Non-CM(25 hours):

ACCE Requirement (Business):

- 4 courses (Econ 201, Bus 207, Bus 212, Bus 214)
- 12 semester hours (anticipated)

ENGL 310 - 3 semester hours (anticipated) GWR

CAED Interdisc. courses (EDES 123 replacement & upper div)

- 6 semester hours (anticipated)

ARCE

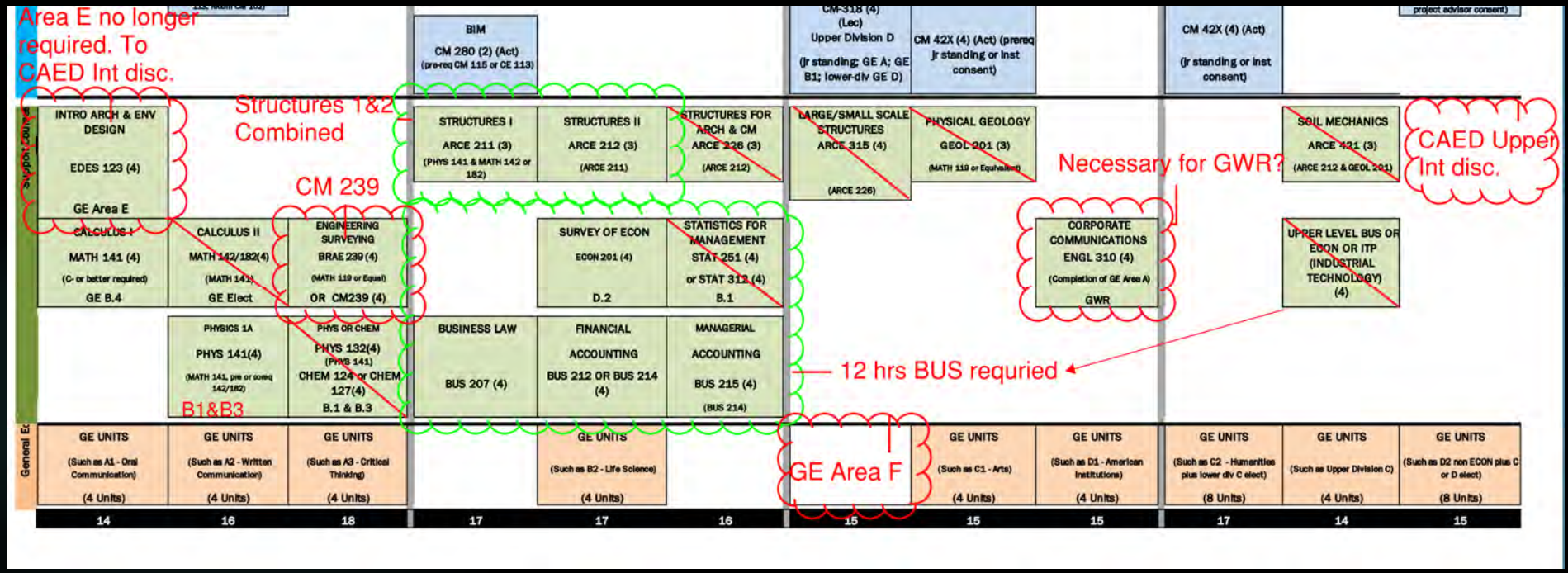
- 1 course (New course ARCE 211& 212 combined)
- 4 semester hours (anticipated)

Semester Conversion CM hours:

46 hrs - GE Requirement (inc. 6 hrs CM)

25 hrs - Non-GE, Non-CM Requirement

71 hrs - Total Required


Area E no longer required. To CAED Int disc.
BIM
CM 280 (2) (Act)
(pre-req CM 115 or CE 113)
CM-318 (4) (Lec)
Upper Division D
(Jr standing; GE A; GE B1; lower-div GE D)
CM 42X (4) (Act) (prereq Jr standing or inst consent)
CM 42X (4) (Act)
(Jr standing or inst consent)
project advisor consent)
Structures 1&2 Combined
CM 239
INTRO ARCH & ENV DESIGN
EDES 123 (4)
GE Area E
STRUCTURES I
ARCE 211 (3)
(PHYS 141 & MATH 142 or 182)
STRUCTURES II
ARCE 212 (3)
(ARCE 211)
STRUCTURES FOR ARCH & CM
ARCE 226 (3)
(ARCE 212)
LARGE/SMALL SCALE STRUCTURES
ARCE 315 (4)
(ARCE 226)
PHYSICAL GEOLOGY
GEOL 201 (3)
(MATH 119 or Equivalent)
SOIL MECHANICS
ARCE 421 (3)
(ARCE 212 & GEOL 201)
CAED Upper Int disc.
Necessary for GWR?
CALCULUS I
MATH 141 (4)
(C- or better required)
GE B.4
CALCULUS II
MATH 142/182(4)
(MATH 141)
GE Elect
ENGINEERING SURVEYING
BRAE 239 (4)
(MATH 119 or Equal)
OR CM239 (4)
SURVEY OF ECON
ECON 201 (4)
D.2
STATISTICS FOR MANAGEMENT
STAT 251 (4)
or STAT 312 (4)
B.1
CORPORATE COMMUNICATIONS
ENGL 310 (4)
(Completion of GE Area A)
GWR
UPPER LEVEL BUS OR ECON OR ITP (INDUSTRIAL TECHNOLOGY)
(4)
PHYSICS 1A
PHYS 141(4)
(MATH 141, pre or coreq 142/182)
PHYS OR CHEM
PHYS 132(4)
(PHYS 141)
CHEM 124 or CHEM 127(4)
B.1 & B.3
B1&B3
BUSINESS LAW
BUS 207 (4)
FINANCIAL ACCOUNTING
BUS 212 OR BUS 214 (4)
MANAGERIAL ACCOUNTING
BUS 215 (4)
(BUS 214)
12 hrs BUS requried
GE UNITS
(Such as A1 - Oral Communication)
(4 Units)
GE UNITS
(Such as A2 - Written Communication)
(4 Units)
GE UNITS
(Such as A3 - Critical Thinking)
(4 Units)
GE UNITS
(Such as B2 - Life Science)
(4 Units)
GE Area F
GE UNITS
(Such as C1 - Arts)
(4 Units)
GE UNITS
(Such as D1 - American Institutions)
(4 Units)
GE UNITS
(Such as C2 - Humanities plus lower div C elect)
(8 Units)
GE UNITS
(Such as Upper Division C)
(4 Units)
GE UNITS
(Such as D2 non ECON plus C or D elect)
(8 Units)
14
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Semester Conversion CM hours:

126 hrs - Degree Requirement:

71 hrs – GE, Non-GE, Non-CM Req'd (inc. 6 hrs CM)

= 55 hrs Remaining for CM

Semester Conversion CM hours:

55 Semester Hours CM

24 semester hrs = 8 Integrated Labs - 3 semester hrs ea

8 semester hrs = 2 lecture/labs (113/114 & 239)

10 hours = Management courses – (232/334/335/443)

9 hrs electives

4 hrs = Sr project (eliminate AIC Exam)

Semester Conversion 8 Integrated Lab Topics (studio model):

- Fundamentals of CM (115)
- Fundamentals of Virtual CM (115, 280)
- Jobsite Management (102, 413, OSHA 10)
- Residential CM (214)
- Commercial CM (313)
- Heavy Civil CM (314 + add'l soils)
- Specialty CM (411)
- Integrated Development Design and CM (413, 450)

Semester Conversion Integrated Lab (studio model):

8 Integrated Labs (24 semester hours total)

- Estimating, Scheduling, Contracts, Means and Methods in Project Based Learning organized around a topic – Spiral Learning Framework
- 3 SH Lab
- Scheduled as 4 hour blocks (9 - 50min contact hrs/wk)
- 30 meeting days/semester
  - 15 week semester = 2 days per week for 4 hr blocks (i.e. MW or T,TR)
  - Morning 8-12 or afternoon 12-4 sections

Semester Conversion - 2 lecture/labs:

8 semester hrs total

- 113/114 – Building materials and systems
  - Similar weekly schedule as quarters (lecture1hr 2x/wk & lab 3hrs 2x/wk)
  - Existing 113/114 content
  - Additional 5+ weeks of MEP materials and connections (sweat copper, wire outlets, etc.)
- 239 – Surveying/Construction Geomatics
  - Lecture/lab schedule
  - Existing 239 content

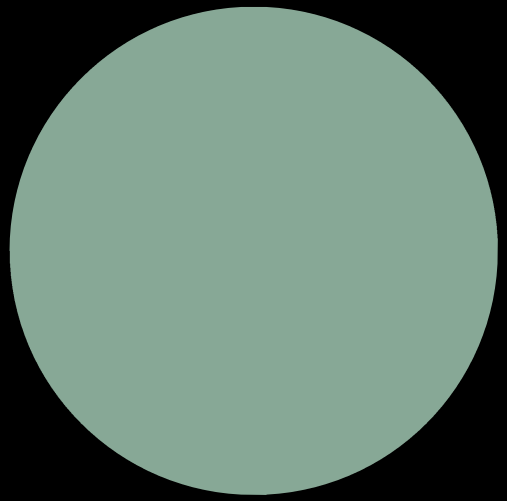
Semester Conversion - Management lecture/activities:

10 semester hrs total

- Management, Law, Acct courses
- 2-4 hour lectures/activities = 10 hours
- Incorporates existing 102-Intro, 232-Eng Econ, 334-Law, 335-Acct & 443-Mgmt Firm
  - (Currently 12 QU)

Semester Conversion Electives:

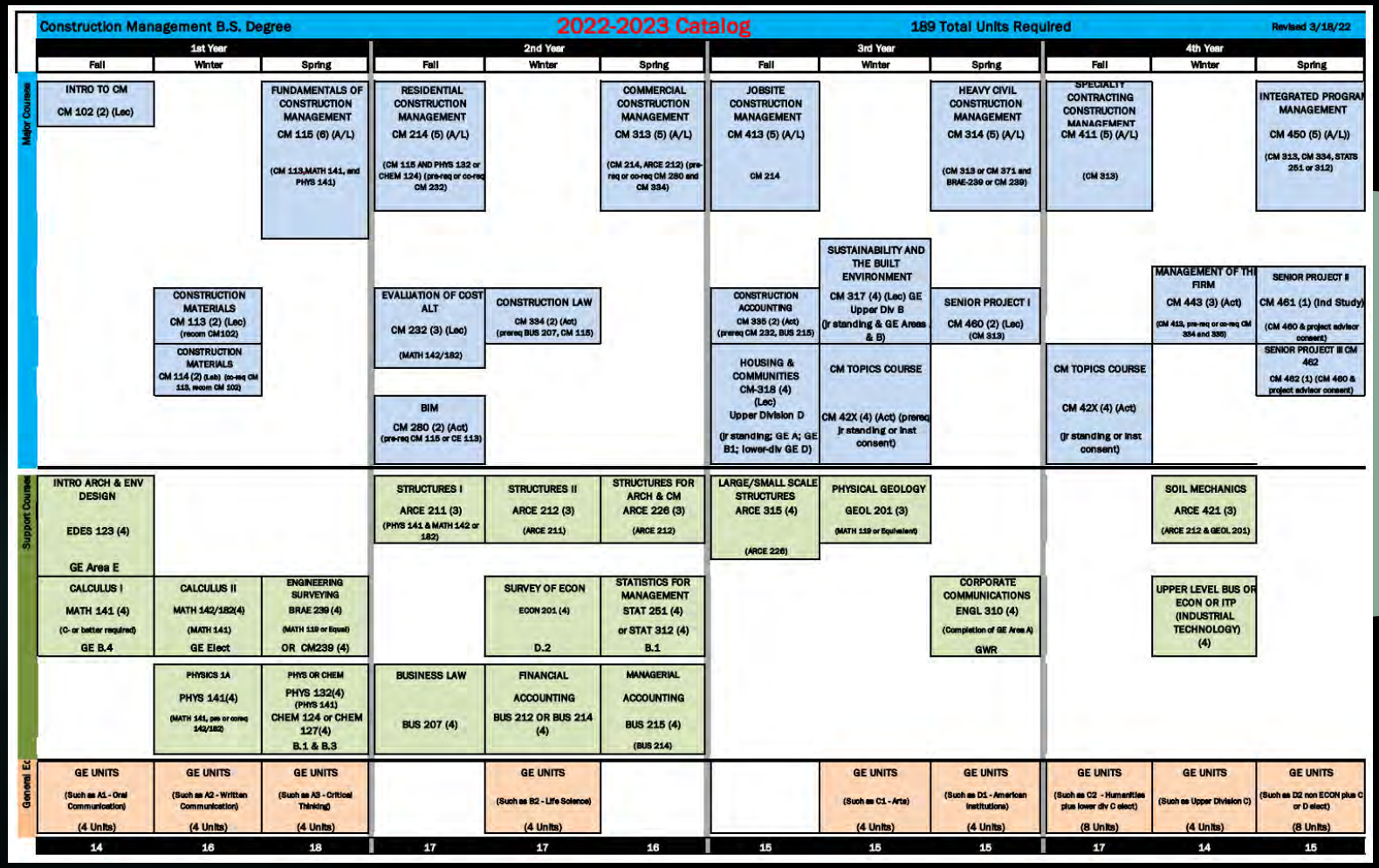
- 9 hrs electives
- Technical Electives in CM
- 3 each – 3 semester hour courses
- Substitutions possible
  - Must meet criteria
  - ARCE/ME/EE
  - Minor programs



Semester Conversion Senior Project:

4 Semester Hours Senior project

- Studio/champion model
  - 8 sections of 12 to 15 students
  - Students accepted into section as topic (service learning, skip the grid, study abroad, hack-a-thon, etc.)
  - 2 semesters (1lecture&1lab each)
- eliminate AIC Exam


Construction Management B.S. Degree
2022-2023 Catalog
189 Total Units Required
Revised 3/18/22
1st Year
2nd Year
3rd Year
4th Year
Fall
Winter
Spring
Major Courses
INTRO TO CM
CM 102 (2) (Lec)
FUNDAMENTALS OF CONSTRUCTION MANAGEMENT
CM 115 (6) (A/L)
(CM 113,MATH 141, and PHYS 141)
RESIDENTIAL CONSTRUCTION MANAGEMENT
CM 214 (5) (A/L)
(CM 115 AND PHYS 132 or CHEM 124) (pre-req or co-req CM 232)
COMMERCIAL CONSTRUCTION MANAGEMENT
CM 313 (5) (A/L)
(CM 214, ARCE 212) (pre-req or co-req CM 280 and CM 334)
JOBSITE CONSTRUCTION MANAGEMENT
CM 413 (5) (A/L)
CM 214
HEAVY CIVIL CONSTRUCTION MANAGEMENT
CM 314 (5) (A/L)
(CM 313 or CM 371 and BRAE-239 or CM 239)
SPECIALTY CONTRACTING CONSTRUCTION MANAGEMENT
CM 411 (5) (A/L)
(CM 313)
INTEGRATED PROGRAM MANAGEMENT
CM 450 (5) (A/L))
(CM 313, CM 334, STATS 251 or 312)
CONSTRUCTION MATERIALS
CM 113 (2) (Lec)
(recom CM102)
CONSTRUCTION MATERIALS
CM 114 (2) (Lab) (co-req CM 113, recom CM 102)
EVALUATION OF COST ALT
CM 232 (3) (Lec)
(MATH 142/182)
BIM
CM 280 (2) (Act)
(pre-req CM 115 or CE 113)
CONSTRUCTION LAW
CM 334 (2) (Act)
(prereq BUS 207, CM 115)
CONSTRUCTION ACCOUNTING
CM 335 (2) (Act)
(prereq CM 232, BUS 215)
HOUSING & COMMUNITIES CM-318 (4) (Lec)
Upper Division D
(jr standing; GE A; GE B1; lower-div GE D)
SUSTAINABILITY AND THE BUILT ENVIRONMENT
CM 317 (4) (Lec) GE Upper Div B
(jr standing & GE Areas A & B)
CM TOPICS COURSE
CM 42X (4) (Act) (prereq jr standing or inst consent)
SENIOR PROJECT I
CM 460 (2) (Lec)
(CM 313)
MANAGEMENT OF THE FIRM
CM 443 (3) (Act)
(CM 413, pre-req or co-req CM 334 and 336)
SENIOR PROJECT II
CM 461 (1) (Ind Study)
(CM 460 & project advisor consent)
CM TOPICS COURSE
CM 42X (4) (Act)
(jr standing or inst consent)
SENIOR PROJECT III CM 462
CM 462 (1) (CM 460 & project advisor consent)
Support Courses
INTRO ARCH & ENV DESIGN
EDES 123 (4)
GE Area E
STRUCTURES I
ARCE 211 (3)
(PHYS 141 & MATH 142 or 182)
STRUCTURES II
ARCE 212 (3)
(ARCE 211)
STRUCTURES FOR ARCH & CM
ARCE 226 (3)
(ARCE 212)
LARGE/SMALL SCALE STRUCTURES
ARCE 315 (4)
(ARCE 226)
PHYSICAL GEOLOGY
GEOL 201 (3)
(MATH 119 or Equivalent)
SOIL MECHANICS
ARCE 421 (3)
(ARCE 212 & GEOL 201)
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MATH 141 (4)
(C- or better required)
GE B.4
CALCULUS II
MATH 142/182(4)
(MATH 141)
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ENGINEERING SURVEYING
BRAE 239 (4)
(MATH 119 or Equal)
OR CM239 (4)
SURVEY OF ECON
ECON 201 (4)
D.2
STATISTICS FOR MANAGEMENT
STAT 251 (4)
or STAT 312 (4)
B.1
CORPORATE COMMUNICATIONS
ENGL 310 (4)
(Completion of GE Area A)
GWR
UPPER LEVEL BUS OR ECON OR ITP (INDUSTRIAL TECHNOLOGY) (4)
PHYSICS 1A
PHYS 141(4)
(MATH 141, pre or coreq 142/182)
PHYS OR CHEM
PHYS 132(4)
(PHYS 141)
CHEM 124 or CHEM 127(4)
B.1 & B.3
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BUS 207 (4)
FINANCIAL ACCOUNTING
BUS 212 OR BUS 214 (4)
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(4 Units)
GE UNITS
(Such as C1 - Arts)
(4 Units)
GE UNITS
(Such as D1 - American Institutions)
(4 Units)
GE UNITS
(Such as C2 - Humanities plus lower div C elect)
(8 Units)
GE UNITS
(Such as Upper Division C)
(4 Units)
GE UNITS
(Such as D2 non ECON plus C or D elect)
(8 Units)
14
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Course Formats **per unit** (1 Hr = 50min):

Lecture – Traditional Model:

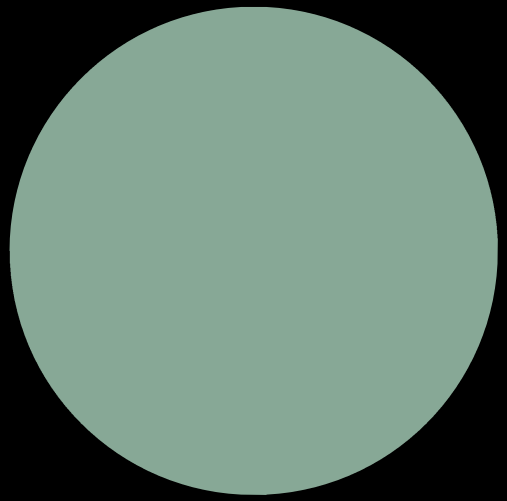
- 1 Hr class meeting
- 2 Hr outside of class
- 1 WTU/Hr

Activity – Flipped Classroom Model:

- 2 Hr class meeting
- 1 Hr outside of class
- 1.3 WTU/Hr

Lab – Studio Model:

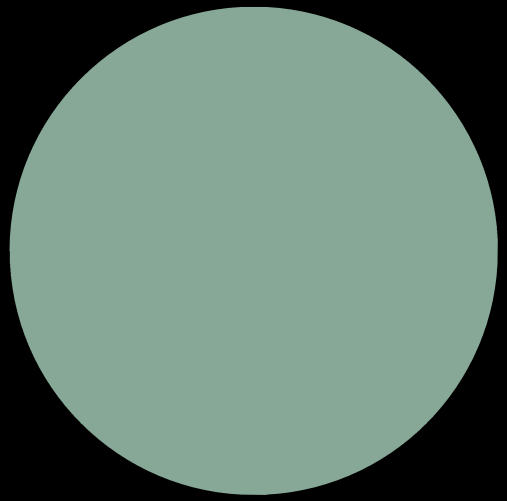
- 3 Hr class meeting
- 0 Hr outside of class
- 2 WTU/Hr



Course Formats **per unit** (1 meeting hour = 50min):

Quarter Unit:

- 10 week quarter
- 1 quarter unit = 10 meeting hours/ quarter
- 4 quarter unit lecture = 40 meeting hours/quarter
- 2 QU activity 3 QU lab = 13 meeting hours/week
- 13 meeting hours/week = 130 meeting hours/quarter



Course Formats **per unit** (1 meeting hour = 50min):

Semester Hour:

- 15 week semester
- 1 semester hour = 15 meeting hours/semester
- 3 semester hour lecture = 45 meeting hours/semester
- 3 semester hour lab = 9 meeting hours/week
- 9 meeting hours/week = 135 meeting hours/semester