ANNUAL PROGRAM REPORT

College	Science
Department	Engineering
Program	M.S. Construction Management
Reporting for Academic Year	2022-2023
Last 5-Year Review	22-23
Next 5-Year Review	2027-2028
Department Chair	Farnaz Ganjeizadeh
Date Submitted	10/10/2023

CALIFORNIA STATE UNIVERSITY EAST BAY SELF-STUDY *(suggested length of 1-3 pages)*

A. Five-Year Review Planning Goals

1. The new STEM designation for the program has the potential to attract international students after the pandemic comes under control.

2. *Faculty:* The faculty that support this program are also supporting the construction management program at the undergraduate level. The faculty are; Farzad Shahbodaghlou, Cristian Gaedicke, and Bita Astaneh-Asl.

3. *Research:* The Construction Management faculty are active in research and have been successful in securing funds for their research. The faculty plan is to aggressively pursue funding opportunities, specifically in areas related to the advancement of construction/engineering education. Summer STEM camp for high school students from Contra Costa County and application of virtual reality in construction.

4. *Equipment:* Through A2E2 annual funding and the normal refresh cycle of computers by IT, we are keeping the Construction Management Laboratories current. During 2022-23 academic year engineering faculty received $55,000 in A2E2 funding.

5. *Enrollment*: During the past couple of years the enrollment in MS construction management has increased significantly to an all-time high of 101.

College	AcademicOrg	Plan	Metric	N-type
CSCI	252-ENGR	Construction Management MS	FallHeadcount	N

Displaying: N - Res. & Non-res., FallHeadcount

College	AcademicO...	Plan	EnrollmentGroup	2018	2019	2020	2021	2022	2023
CSCI	252-ENGR	Construction Managemen t MS	New Grad/PBAC	27.00	14.00	8.00	19.00	47.00	39.00
			Cont. Grad/PBAC	22.00	42.00	40.00	25.00	43.00	62.00
			Total	49.00	56.00	48.00	44.00	90.00	101.00

Enrollment Breakdown
White 10%   International 80%   URM 13%

B. *Progress towards Five-Year Review Planning Goals*

1. Increased enrollment to an all-time high of 101 in the fall quarter of 2023.

2. Successfully held two major career fairs in 2022-23. More than 50 companies and 120 students attended each event.

C. Program Changes and Needs

Report on changes and emerging needs not already discussed above. Include any changes related to SB1440, significant events which have occurred or are imminent, program demand projections, notable changes in resources, retirement/new hires, curricular changes, honors received, etc., and their implications for attaining program goals. Organize your discussion using the following subheadings.

Overview: The MS Construction Management program started in the year 2009 and has been steadily growing to over 101 students.

Faculty: Since 2009, we have hired 5 faculty members for this program. The faculty hires include: Dr. Farzad Shahbodaghlou as Director and Graduate advisor in 2009, as well as Dr. Cristian Gaedicke in 2013, Dr. Reza Akhavian in 2015 and Dr. Fadi Castronovo in 2016, Dr. Bita Astaneh-Asl in 2020. Reza Akhavian and Fadi Castronovo have left in 2020.

The M.S. faculty of Construction Management also serve the undergraduate program. We do anticipate the need for an additional TT faculty.

Staff: We recently are being supported by a central hub that is for CS/ENGR. There are three full time staff serving the hub. We also employ one full time technician Mr. Linh Nguyen.

Resources: The upgrade of the hardware in the engineering computer laboratory (VBT 223) was completed in 22-23.

Assessment: An extensive assessment process is in place for the Construction Management program. Sample results are provided in the following section.

SUMMARY OF ASSESSMENT *(suggested length of 1-2 pages)*

PROGRAM LEARNING OUTCOMES (PLOS)

			I.L.O Alignment
	Students graduating with a M.S. Construction Management degree from Cal State East Bay will be able to:		
a		Understand and implement risk management, scheduling and estimating, building information modeling, high performance building assessment systems, and project delivery methods.	1,6
b		Use effective communication skills to solve practical construction problems, explain and defend the application of advanced construction practices associated with planning, staffing, scheduling and controlling construction projects.	2, 4
c		Plan and deliver a project meeting the desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, constructability, and sustainability.	2, 5
		Assessment Plan repeats every three year	

The following outcome is assessed during this reporting period.

. Is it aligned to an ILO?	Yes, ILO 1,6
3.Sample (courses/# of students)	CMGT 670 Construction Enterprise and Risk Management
4. SLO from the course	Analyze the different types of risk and assess their likelihood and impact; Evaluate the use of different quantitative analysis techniques such as Monte Carlo simulation to assess the overall effect of risk at a project and corporate level, thus facilitating decision making under uncertainty.

5.Assessment indicators	a-Midterm exam question; e- Final exam performance
6.Assessment instrument	Program rubric
7.Time (which semester(s))	a-Spring 2023
8.Responsible person(s)	a-Prof. Gaedicke
9.Ways of reporting (how, to who)	The results (qualitative and quantitative) will be reported by faculty to the department chair via completion of the course Faculty Self-Assessment form.
10.Ways of closing the loop	Interaction between chair, faculty and industry advisory board

Summary: Students Analyze different types of risk and assess their likelihood and impact; Evaluate the use of different quantitative analysis techniques such as Monte Carlo simulation to assess the overall effect of risk at a project and corporate level, thus facilitating decision making under uncertainty.

The student mid-term and final exam results were high grade of 100% and the low was 67% with an average of 87%.

Program improvement:

The results of this assessment will be discussed in the next May Industry Advisory Board meeting and changes to the course and program will be implemented in the offering of this course and other courses.

Assessment Plans for Next Year:

Year 4: 2023-2024	
1. Which PLO(s) to assess 2. Is it aligned with an ILO?	PLO b - use effective communication skills to solve practical construction problems, explain and defend the application of advanced construction practices associated with planning, staffing, scheduling and controlling construction projects. (ILO 2,4)
	Yes, ILO 2,4
3. Sample (courses/# of students)	CMGT 685 Special Topics in Construction Management
SLO from the course	Identify current issues involving the construction industry. Conduct research, and present their findings orally and in writing.
4. Assessment activity	Data Analysis and Project
5. Assessment instrument	Oral presentation rubric
6. Time (which semester(s))	Summer 2024
7. Responsible person(s)	c-Prof.Shahbodaghlou
8. Ways of reporting (how, to who)	The results (qualitative) will be reported by faculty to the department chair via completion of the course Faculty Self-Assessment form.

DISCUSSION OF PROGRAM DATA & RESOURCE REQUESTS

Discussion of Trends & Reflections

Notable Trends:
Summarize and discuss any notable trends occurring in your program over the past 3-5 years based on program statistics (1-2 paragraphs). You may include 1-2 pages of supplemental information as appendices to this report (e.g., graphs and tables).

The construction industry is continuing to grow and the job market for graduates is continues to be strong. The enrollment in this program has steadily grown in recent years.

Reflections on Trends and Program Statistics:

Request for Resources   (suggested length of 1 page)

Upkeep of the laboratory software and hardware, access to large computer lab/classes for some of the courses.

Request for Tenure-Track Hires:

We see the need for an additional TT faculty to be able to serve the growing number of students in the program.