

# 1. INTRODUCTION

## DEGREE PROGRAM NAME

Formal degree title name: Bachelor of Science in Construction Management

### 1.1. Requirements

#### 1.1.1. INSTITUTION AND DEGREE PROGRAM ELIGIBILITY

**1.1.1.1. The degree program is to be located in an educational institution of higher learning that is legally authorized under applicable laws to provide a degree program of education beyond that of the secondary level. Provide background information on the institution, educational unit, and the degree program as it relates to history, mission, size, accreditation, etc.**

Compliance Statement for ACCE Standard 1.1.1.1: California Polytechnic State University, San Luis Obispo (Cal Poly) is one of 23 campuses in the California State University (CSU) system that is authorized to provide post-secondary degree programs by the CSU Board of Trustees and is accredited by the Western Association of Schools and Colleges (WASC). The CSU system is administered by a Board of Trustees and a Chancellor. Each of the 23 campuses has its own President.

The individual campuses were brought together as a system by the Donahoe Higher Education Act of 1960. In 1972 the system became known as “The California State University and Colleges,” and in 1982 attained the name the system bears today, “The California State University.” The oldest campus—what is now called San Jose State University—was founded in 1857, the newest—California State University, Channel Islands—began accepting freshmen in Fall 2003.

California Polytechnic State University, San Luis Obispo, was founded in 1901 when the State Legislature established a vocational high school in San Luis Obispo. The institution served as a forerunner in vocational education for agriculture and industry in California. In 1924, its Board of Trustees was dissolved, and the State Board of Education administered the school until July 1, 1961, when administration passed to the Trustees of The California State Colleges.

Cal Poly began offering junior college courses in 1927 and became a two-and three-year institution for higher education in 1933. In 1940, the first baccalaureate degrees were authorized, and the first Bachelor of Science degrees were awarded in 1942. The California Polytechnic School was renamed the California State Polytechnic College in 1947 and was granted approval to offer the Master of Arts degree in education in 1949 and the Master of Science degree in 1967. In 1972, Cal Poly’s official name was changed to California Polytechnic State University, the name it still bears.

Cal Poly currently enrolls nearly 22,000 students and has a highly competitive admissions program with about 65,000 applications per year. Applicants must select a major at the time of application – there is no Open Option or Undeclared major. This results in an academically focused and very motivated student body.

Construction Management (CM) is one of five departments in the College of Architecture and Environmental Design which developed as follows:

- 1946 The college started as the newly created Architectural Engineering Department offering a 4-year degree.
- 1961 Initiatives for Construction program started.
- 1964 The state education code permitted this institution to offer a five-year Bachelor of Architecture degree.
- 1965 The Architecture program was accredited by NAAB.
- 1968 The two degrees of Architecture and Architectural Engineering were organized into programs, and the name of the unit changed to the School of Architecture.
- 1970 The program in City and Regional Planning was added to the two other programs offering a four-year B.S. in City and Regional Planning.
- 1970 The name of the school was changed to the School of Architecture and Environmental Design.
- 1970 The program in Construction Engineering was added offering a four-year B.S. in Construction Engineering.
- 1972 First graduating class in Construction Engineering.
- 1972 The program in Landscape Architecture was added offering a four-year B.S. in Landscape Architecture.
- 1975 The Bachelor of Architecture degree changed from a five-year degree to a four-year B.S. Architecture degree and a two-year M.S. degree in Architecture was added.
- 1974 Master of City and Regional Planning degree added.
- 1976 Master of Science in Architecture was changed to Master of Architecture.
- 1978 School of Architecture and Environmental Design reorganized into departments.
- 1978 Name of Construction Engineering changed to Construction.
- 1978 Initial accreditation of Construction Program by the American Council for Construction Education.

- 1978 B.S. in Architecture dropped and the five-year Bachelor of Architecture degree reinstated.
- 1983 Reaccreditation of Construction Program by the American Council for Construction Education.
- 1984 Name of department and degree program changed from Construction to Construction Management.
- 1988 Reaccreditation of Construction Management Program by the American Council for Construction Education.
- 1988 Master of Architecture degree converted to M.S. in Architecture.
- 1993 Reaccreditation of Construction Management Program by the American Council for Construction Education.
- 1993 The School of Architecture and Environmental Design (SAED) is changed to the College of Architecture and Environmental Design (CAED).
- 1994 Bachelor of Landscape Architecture (BLA) five-year degree started. Department drops four-year BS.
- 1996 Reaccreditation of Construction Management Program by the American Council for Construction Education.
- 1999 Construction Management Department hosted the 35th Annual Conference of the Associated Schools of Construction.
- 1999 Reaccreditation of Construction Management Program by the American Council for Construction Education.
- 1999 First California Bond Issue passed to provide preliminary design funds for a new Construction Management Building. Capital Campaign started to raise \$6 million to expand the size of the state-supported building.
- 2004 Second California Bond Issue passed to provide final design and construction funds for new Construction Management Building: The Construction Innovations Center.
- 2004 Groundbreaking for new Construction Innovations Center. The new building occupies the site of the old Air Conditioning Building where the first classes in the CAED were offered.
- 2008 Reaccreditation of Construction Management Program by the American Council for Construction Education.

- 2008 Building Dedication for new Construction Innovations Center.
- 2009 New Integrated Curriculum implemented by Construction Management Department.
- 2010 Building Dedication for the Simpson Strong-Tie Materials Demonstration Laboratory and Construction Management 40th Anniversary Celebration
- 2013 Construction Management Department hosted the 49th Annual Conference of the Associated Schools of Construction.
- 2014 Reaccreditation of Construction Management Program by the American Council for Construction Education.
- 2014 Launch of the Facilities Management and Operations Graduate Certificate Program.
- 2020 Launch of the Heavy Civil Minor Program.

The CM Department resides in the College of Architecture and Environmental Design (CAED). The mission of the CAED is to be the premier institution in the nation preparing students for leadership roles in the professions that plan, design, construct and steward the built environment. The college grew out of a program of Architectural Engineering which, from 1946 to 1964, was a program within the Division, or School, of Engineering (see historical chronology of the college in Section I.B). In 1964, the addition of a five-year program in Architecture was approved.

During the middle 1960's, the programs experienced extremely rapid growth and, in 1968, the School of Architecture was created with George Hasslein, formerly the Architecture Program Head, selected to serve as dean. The program in City and Regional Planning was added in 1970, the same year that the name of the school was changed to the School of Architecture and Environmental Design. Construction Engineering was added to the school in 1970 and Landscape Architecture in 1972. All programs were reorganized into departments in 1978 and, in July 1993, the University renamed the "School" as the "College" of Architecture and Environmental Design with Paul R. Neel serving as dean.

In 1961, Mr. Paul Spencer, a member of the Board of Trustees for the California State Colleges and a general contractor in Southern California, asked the President of the College (University) to review the possibility of establishing a Construction Engineering Program at Cal Poly, San Luis Obispo. Other institutions within the system were also given consideration and nearly ten years of deliberation, research, and evaluation followed. During this time, the School of Architecture and Environmental Design was created. In 1970, approvals were given to begin a program in Construction Engineering. Since all programs within the school had a common first and

second year curriculum, the Construction Engineering Program began classes in Fall 1970 with a third year class, producing its first graduating class in June 1972.

In 1978, the "Construction Engineering" program name was changed to "Construction." This name change reflected the program's emphasis on management rather than engineering. The name "Construction Management" was adopted in 1984.

The Construction Engineering program received its first accreditation in 1978 with subsequent reaccreditation as Construction or Construction Management in 1983, 1988, 1993, 1996, 2002, 2008, and 2014.

Reflecting the Learn-By-Doing tradition at Cal Poly, the CM Department has always had a heavy emphasis on excellence in undergraduate education. The curriculum has always been primarily based on lab instruction and that history is readily seen in the curriculum today. The Integrated Curriculum that was fully implemented in 2009 still relies on project-based learning and team solutions to practical problems in the construction profession.

As reflected in the specific mission and goals stated in the next section of this self-study, there is a specific commitment to professionalism, problem solving, leadership, communication, and excellence resulting in graduates who are ready to perform in the industry from "day one." This ability has been confirmed by industry recruiters of our graduates and by other measures of educational outcomes.

The emphasis on professionalism has been manifested in the department in two important ways. First of all, the department supports and encourages faculty efforts to attain the professional credentials appropriate to their educational background and experience (e.g., CPC, PE, AIA, LEED AP, DBIA, PMP, CCC, CPE, etc.) The department covers annual dues or registration fees and supports faculty participation in national conferences with an annual budget of donated funds ranging from \$80,000 to \$100,000.

Secondly, the department has created the Professional Advising for Construction Students (PACS) program to raise students' awareness of and participation in professional and trade associations. Each year at a mandatory advising session in the fall, all CM students review with their advisors their progress towards understanding and participating in extracurricular professional activities. The department covers the student costs for successfully passing certification exams, participating in competitions, and attending national conferences with a budget ranging from \$80,000 to \$150,000 per year separate from the faculty professional development budget described above.

The CM department at Cal Poly has nearly doubled in the size of the student body over the past six years: from 272 students in the fall of 2012 to 596 students in the fall of 2020. In the current quarter (Spring 2020), we are teaching 31% more student credit units than just one year ago. In order to

cover this load, we have added six new full-time faculty members in just the past two years bringing our total full-time faculty to 16. The number of graduating seniors in AY 2019-2020 is 86 and there are more than 250 industry recruiters visiting the department to find future talent. Table 1.1.1.1 shows the numbers of graduates by year from all departments in CAED.

*Table 1.1.1.1 Number of Graduates by year*

<b>Degree</b>	<b>CM</b>		<b>ARCE</b>		<b>ARCH</b>		<b>CRP</b>		<b>LA</b>	
<b>Academic Year</b>	18-19	19-20	18-19	19-20	18-19	19-20	18-19	19-20	<b>18-19</b>	<b>19-20</b>
<b>Majors</b>	469	552	322	317	826	831	171	152	202	212
<b>Graduates</b>	95	86	59	44	116	157	30	19	32	26

The CM Department is one of five departments in the College of Architecture and Environmental Design, each administered by its own department head. Only the Architecture Department, as the largest department in the College, currently has designated an associate department head. The College is administered by a Dean and two Associate Deans who report to the Provost as shown in Section 2.1.1.1. The CM Department is supported by three full time administrative staff as well as standing faculty committees and special task forces as needed. This structure is further described in Sections below.

**1.1.1.2. The degree program is to be in operation for a sufficient time to have granted the degree for which accreditation is sought. Degree programs shall have at least one class of graduates. Describe the time of degree program operation and graduation rates by semester.**

Compliance Statement for ACCE Standard 1.1.1.2: Construction Management has been in operation since 1970 and issuing this degree since 1972. The program received full accreditation by the American Council for Construction Education (ACCE) in 1978. Graduation rates of CM graduates may be seen in Table 1.1.1.2.

*Table 1.1.1.2 Graduation Rates*

<b>Fall Cohort</b>	<b>Four-Year Graduation Rate</b>	<b>Five-Year Graduation Rate</b>	<b>Six-Year Graduation Rate</b>
2013	23.9%	79.5%	84.1%
2014	33.9%	74.4%	78.5%
2015	39.8%	77.9%	77.9%
2016	28.3%	-	-

**1.1.1.3. Describe the major emphasis of the degree program.**

Compliance Statement for ACCE Standard 1.1.1.3: Cal Poly's bachelor's degree program has a sole emphasis on professional construction education and has been accredited by ACCE since 1978.

Reflecting the Learn-By-Doing tradition at Cal Poly, the CM Department has always had a heavy emphasis on excellence in undergraduate education. The curriculum has always been primarily based on lab instruction and that history is readily seen in the curriculum today. The Integrated Curriculum that was fully implemented in 2009 and still relies on project-based learning and team solutions to practical problems in the construction profession.

The CM program at Cal Poly is focused primarily on teaching the technical and managerial aspects of construction. Through the curriculum students develop a strong foundation from which to build greater understanding of the process of managing a construction project. Further emphasis is placed on developing students' leadership, communication skills, and the application of existing and innovative technologies used in the construction industry.

**1.1.1.4. Who is the designated administrator responsible for the leadership and management functions of the degree program (include title and rank).**

Compliance Statement for ACCE Standard 1.1.1.4: Cal Poly's Department Head serves as the designated administrator. The current Department Head is:

Jeong H. Woo, Ph.D.  
Professor and Department Head  
Construction Management Department