

EXECUTIVE SUMMARY

WSU Department: Construction Management Technology
Self-Study Document, Fall 2022

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The following is a summary of the self-study document. For complete information, please refer to the full self-study document.

Mission Statement:

To Prepare students from diverse backgrounds for success in any sector of the construction industry.

Curriculum—Program Outcomes:

Program Learning Outcome 1: To prepare students for entry into successful careers in Construction Management emphasizing the mastery of construction management fundamentals, the ability to solve construction management problems, and the importance of construction management judgement, leadership, construction investigation, and the creative process of construction management applications.

Program Learning Outcome 2: To instill in students the sense of pride and confidence that comes from applying their knowledge of construction management principles and procedures to the economic and social benefit of society.

Program Learning Outcome 3: To encourage students in an understanding of the professional and ethical obligations of the construction manager, to conduct themselves as professionals, recognizing their responsibility to protect the health and welfare of the public, and to be accountable for the social and environmental impact of their construction management practice.

Program Learning Outcome 4: To establish an educational environment and curriculum in which students participate in cross disciplinary, team-oriented, open-ended activities that prepare them to work in integrated construction management teams.

Program Learning Outcome 5: To offer curriculum that encourages students to become broadly educated construction managers and life-long learners, with a solid background in the basic sciences and mathematics, and understanding and appreciation of the arts, humanities, and social sciences, and ability to communicate effectively for various audiences and purposes, and a desire to seek out further educational opportunities.

Program Learning Outcome 6: To expose students to advances in construction management practice as preparation for opportunities in professional practice and graduate education.

Program Curriculum

CMT 1100 Construction Management Orientation
CMT 1150 Construction Graphics

CMT 1220 Construction Contracts
CMT 1310 Materials and Methods
CMT 1330 Civil Materials
CMT 1550 Construction Safety
CMT 2210 Construction Jobsite Management
CMT 2260 MEP
CMT 2340 Civil Design and Layout
CMT 2360 Commercial Design and Codes
CMT 2410 LEED-GA Preparation
CMT 2640 Quantity Survey
CMT 2990 Construction Management Seminar
CMT 3115 Construction Cost Estimating
CMT 3130 Construction Planning and Scheduling
CMT 3310 Leadership in the Construction Industry
CMT 3370 Preconstruction Services
CMT 4120 Construction Accounting and Financial Management
CMT 4150 Construction Equipment and Methods
CMT 4330 Applied Structures
CMT 4350 Temporary Structures
CMT 4510 Design Charrette
CMT 4520 ASC Student Competition
CMT 4570 Business Planning for Construction Companies
CMT 4620 Senior Project

Student Learning Outcomes and Assessment:

The following lists the nineteen (19) student learning outcomes developed by the program faculty in conjunction with the Program Industry Advisory Board for the Program:

- a. Create and apply effective communications
- b. Create a construction project safety plan
- c. Create construction project cost estimates
- d. Create construction project schedules
- e. Create a business plan for a small construction company
- f. Analyze methods, materials, and equipment used to construct projects
- g. Apply construction management and supervisory skills as a member of a multi-disciplinary team
- h. Apply current software applications to the construction process
- i. Apply basic surveying techniques for construction layout and control
- j. Apply the preconstruction process and alternate delivery methods
- k. Apply the principles of construction risk management
- l. Apply the principles of construction accounting, cost control, and profit maximization
- m. Understand construction quality assurance and control
- n. Understand the legal implications of construction contracts and documents and regulatory law
- o. Understand the principles of sustainable construction
- p. Understand the principles of construction design
- q. Understand the principles of effective leadership
- r. Understand professional and ethical responsibility
- s. Understand how to develop professional relationships

Assessment:

The program does not assess students receiving the AAS degree in Construction Management.

The program assessment for the bachelor (BS) degree determined that students graduating from the program are meeting the needs of the construction industry. For the most recent five-year period, the Parson Construction Management program used the Associate Constructor (AC) Level 1 exam, as has been done in the past, as administered by the American Institute of Constructors (AIC) and the Constructor Certification Commission to assess students receiving the BS degree. Assessment scores are based upon maximum/minimum scores in subject matter areas as well as a maximum/minimum aggregate score for the exam. All program students are required to score a 192 of 300, or better, on the exam to graduate from the program. Students consistently have met the program's goal by scoring above the national average total test score and have consistently scored above the national average test scores on specific subject matter areas of the exam.

Advising

The Department of Construction and Building Sciences has a written policy governing advising. This policy covers the following topics:

- Advising assignments
- Procedures for waiving courses
- Current and past articulation agreements along with expiration dates
- Waiving of prerequisites
- The student's responsibilities regarding advising
- The program's philosophy regarding the scheduling of classes
- Requirements for departmental honors
- Procedures for documenting student advising

The advising for CM students is done with the combined efforts of the college advisors and the CM program coordinator/advisor. Students are encouraged to meet with an advisor at the beginning of their freshman and junior years. Common mistakes are identified and discussed with the students to help streamline the registration process. The program faculty can assist by encouraging students to meet with an advisor at the beginning of their senior year.

Faculty

The department has five full-time faculty, which includes two tenure track professors and three instructors. One instructor is assigned to the facilities management emphasis and the other two are assigned to the construction management emphasis. The program uses nine adjunct faculty.

Tenure-track faculty are required to have a minimum of five years of full-time experience in the construction industry and a master's degree in construction management or a related field.

Instructors and adjunct faculty are required to have a minimum of five years of full-time experience in the construction industry and a bachelor's degree in construction management.

The faculty includes two females and eleven males who are Caucasian and one Hispanic male. In alignment with the diversity goals of our college, we will actively seek additional gender and ethnic diversity of our faculty as full-time or adjunct positions become available.

Program Support

The Parson CM Program is part of the Department of Construction and Building Sciences. The department has one full-time administrator and one work-study student. The level of support staff is currently adequate for our needs.

The names and titles of the individuals responsible for each of the units that teach courses required by the program being evaluated are the following:

Mathematics – Department Chair – Dr. Sandra Fital-Akelbek; Physics – Department Chair – Dr. Colin Inglefield; Communications – Department Chair – Dr. Anne Bialowas; Accounting – Department Chair – Dr. James Hansen; Economics – Department Chair – Dr. Gavin Roberts; Business – Department Chair – Dr. Jennifer Anderson; Botany – Department Chair – Dr. Suzanne Harley; School of Computing – Department Chair – Dr. Kyle Feuz

Non-academic Support Units

The names and titles of the individuals responsible for each of the units that provide non-academic support to the program being evaluated are listed below:

The Stewart Library has a full time librarian assigned to the college. In addition, each department has a budget for library materials. The University Librarian is Dr. Wendy Holliday, Extension 6403, and the librarian assigned to our college is Diana Meiser, extension 7495.

Because the college maintains its own computing resources, it does not rely on services from the university's information technology office. The individual that maintains the computing services for the college is Brad Naisbitt, Extension 7762.

Placement and employment services are taken care of through the University's Career Services office. Aimee Golden is the career services specialist and works jointly with the career services office as well as the Engineering, Applied Science and Technology college. Aimee's extension is 6447.

Tanya Scott, extension 6877, and Angie Payan, extension 6369 provides student advising for non-core coursework. Alicia Christensen, extension 7552, handles recruiting for the college.

College and program development is managed through the WSU Development Office. Kristin Wojciechowski, extension 7209, provides college and departmental support. Administrative support of the program is sufficient to meet the needs of the program.

Relations with the External Community

For the past five years the Construction Management Industry Advisory Committee (IAB) has typically met twice per year in September and February. During the pandemic the committee met virtually and its effectiveness was lacking. It was also noted that whereas in the past the board was made up of nearly all influential decision makers, many of those were no longer attending. In addition, many representatives from new companies that have not been financial supporters of the program were in attendance. Discussions took place about reassessing the makeup of the Industry Advisory Board to determine the quality and number of those on the board. The board did not meet in September of 2022. The program has benefitted from the board providing advice and suggestions on curriculum and course content and have advised on employment strategies. They have also provided generous scholarships and department funding and have been instrumental in obtaining support and backing for donations and scholarships for the program and department.

Results of Previous Program Reviews

Some of the recommendations made during the last program review were the increased use of technology, additional opportunities for students to improve their presentation skills, and continuing education to maintain relevancy for the faculty. With nearly 100% turn over in faculty due to retirement, a new department administrative assistant, three department chairs and a pandemic since the previous review, no meaningful pursuit or measurement and tracking of these recommendations has taken place; however, each of these items have been discussed and in some cases improved upon despite the logistical challenges presented by turnover in faculty, staff and administration. The effort to improve the students' presentation skills was recently addressed via curriculum changes approved for fall 2023. Individually various faculty have either added software programs to their coursework or increased the use of existing programs.

Construction Management	2017-2018	2018-2019	2019-2020	2020-2021	2021-22*
Department Student Credit Hours Total ¹	4,558	5,069	5,480	6,426	7,434
Construction Management SCH	2,390	2,496	2,507	2,937	3,591
Building Design and Construction SCH	0	333	387	552	771
Interior Design SCH	2,168	2,240	2,586	2,937	3,072
Student FTE Total ²	151.9	169.0	182.7	214.2	247.8
Construction Management FTE	79.7	83.2	83.6	97.9	119.7
Building Design and Construction FTE	0.0	11.1	12.9	18.4	25.7
Interior Design FTE	72.3	74.7	86.2	97.9	102.4
Student Majors ³ (Construction Management and CMT Only)					
Second Major or Concentration	175	164	173	169	183
Minors	35	31	37	32	33
	5	5	4	5	4
Program Graduates ⁴ (Construction Management and CMT Only)					
Associate Degree	20	24	11	21	7
Bachelor Degree	25	25	18	20	12
Student Demographic Profile ⁵ (Const. Management and CMT Only)					
Female	11	11	14	9	22
Male	164	153	159	160	161
Faculty FTE Total ⁶ Department (Includes BDC, CMT, and Prof Sales for FY 18 and 19, BDC and CMT for 20 and 21)	26.4	25.7	12.4	13.6	N/A
Adjunct FTE	10.6	9.4	3.9	5.0	N/A
Contract FTE	15.8	16.3	8.5	8.6	N/A
Student/Faculty Ratio ⁷ (Department)	5.7	6.6	14.8	15.8	N/A

Information Regarding Current Review Team Members

1. Dr. Nicole Flink, Ph.D. – Assistant Professor, Weber State University, nicoleflink@weber.edu
2. Jared Baker, - Lecturer, Southern Utah University, jaredbaker@suu.edu
3. Kendall Smith, Vice President, Hughes General Contractors, kendall@hughesgc.com