

EXECUTIVE SUMMARY
WSU Department: Construction Management Technology
Self-Study Document, Fall 2017

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

Mission Statement:

The mission of the Parson Construction Management Technology program, as an integral part of the College of Engineering and Applied Science Technologies, is a program to educate students from diverse backgrounds in the fundamental skills, knowledge, and practices of the construction profession in order to prepare them for construction management positions in service to the community and employers 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:

Student Learning Outcomes

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 five-year program assessment findings for the bachelor (BS) degree confirmed that students graduating from the program are meeting the needs of the construction industry. As in the past, the Parson Construction Management Technology program uses the Associate Constructor (AC) Level 1 exam given 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 scored above the national area test scores on specific subject matter areas of the exams.

Academic Advising:

The Department of Construction Management has a written policy governing advising.

This policy covers the following topics:

- Advising assignments
- Procedures for waiving courses
- Current and past articulation agreement 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

Through discussion with advisors and the students, the program continues to identify the most common mistakes students make when scheduling their classes. The faculty provides advice on how to avoid these mistakes. The program faculty needs to continue to encourage students to come in for advising at the beginning of their senior year.

Faculty:

The department has five full-time faculty, which includes one tenured, full professor, two tenured, associate professor, and two instructor. One instructor is assigned to the facilities

management emphasis, the other instructor is assigned to the construction management emphasis. The program also uses six adjunct faculty.

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

The faculty includes five male, all Caucasian. As we hire new faculty, we will actively recruit female and minority faculty.

Program Support:

The Parson CMT Program is housed in the Department of Construction Management. The department has one three-quarter-time secretary/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: Mathematics – Department Chair – Dr. Paul Talaga, Physics – Department Chair – Dr. Colin Inglefield, Communications – Department Chair – Dr. Sheree Josephson, Accounting – Department Chair – Dr. David Malone, Economics – Department Chair – Dr. Brandon Koford, Business – Department Chair – Dr. Michael Stevens, Botany – Department Chair – Dr. Suzanne Harley, School of Computing – Department Chair – Dr. Brian Rague

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 Jason Francis, extension 6069.

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 service is handled through the university's Career Services office. They have a full-time individual assigned to our college who is Kim Ann Ealy, extension 6877.

Rainie Lynn Ingram, extension 7785, handles student advising service for non-core coursework

Dana D. Dellinger, extension 7552, handles college recruiting for the college. Dana serves on the program advisory board.

College and program development is handled through the WSU Development Office. Kelly Stackaruk, Director, extension 6978 and Kristin Wojciechowski, Associate Director, extension 6187, provides college and department support.

Kelly serves on the Scholarship and Fundraising subcommittee of the IAB.

Administrative support of the program is sufficient to meet the needs of the program.

Relations with External Community:

The Construction Management Industry Advisory Committee (IAB) meets formally four times a year, two meetings in fall and spring. Industry advisors, CMT faculty, the Department Chair, and the Dean of our college attend the committee meetings. The proceedings are conducted by the IAB chairperson or designated member of the advisory board leadership. This board has been extremely active the past several years, providing financial support and industry advice. The program relies on this board to provide advice and suggestions on curriculum changes, course content, scholarships, department funding, employment strategies, etc. In the past, the board has been very helpful in obtaining support and backing for the program in forms of donations and scholarships.

Results of Previous Program Reviews:

It was identified that the program should complete the curriculum review and seek to make changes to the curriculum to address weaknesses identified by ACCE and to strengthen the curriculum. Faculty reviewed changes, and updates and modifications made as appropriate. Changes were developed and revisions established for curriculum update the spring of 2017. It was also identified that the program needed to update program outcomes for the CMT courses used for the BS degree. Revised program/student outcomes were developed and implemented by the program.

Student, Faculty, Contract/Adjunct Faculty and Staff Statistics:

	2012-13	2013-14	2014-15	2015-16	2016-17
Student Credit Hours Total	2,707	2,319	2,342	2,053	1,984
Student FTE Total	90.23	77.30	78.07	68.43	66.13
Student Majors	189	192	186	176	166
Program Graduates					
Associate Degree	2	2	5	13	18
Bachelor Degree	18	15	9	21	21
Student Demographic Profile					
Female	12	11	9	8	10
Male	177	181	177	168	156
Faculty FTE Total	7.07	7.34	6.17	5.10	n/a
Adjunct FTE	2.75	2.78	1.59	0.99	n/a
Contract FTE	4.32	4.56	4.56	4.11	n/a
Student/Faculty Ratio	12.76	10.53	12.69	13.42	n/a

Academic Year		2012-13	2013-14	2014-15	2015-15	2016-17
90-CH majors graduating w/in 1 year	University	957	987	1145	1762	2755
	College	138	151	237	255	519
	Department	5	2	22	27	25
90-CH majors graduating w/in 2 years	University	761	712	1044	994	234
	College	131	132	181	144	43
	Department	11	9	4	4	1
90-CH majors graduating w/in 3 years	University	297	300	742	109	-
	College	51	65	144	18	-
	Department	8	5	8	0	-
Average overall hours of graduates	University	141.00	140.00	139.58	141.00	139.50
	College	147.50	147.00	141.00	146.00	149.00
	Department	152.00	149.99	149.50	143.00	149.00
Average 'years to degree' for bachelor degree	University	6.31	5.98	5.69	5.99	5.99
	College	6.98	7.30	6.31	6.68	6.32
	Department	9.68	7.67	11.99	8.95	6.95
Other Analyses	Fall	2012-13	2013-14	2014-15	2015-16	2016-14
Ratio of lower division/upper division SCH	University	2.58	2.34	2.35	2.38	2.47
	College	2.26	2.27	2.15	2.00	2.11
	Department	0.93	1.15	1.17	1.27	
Ratio of GenEd_Service/overall SCH	University	NA	NA	NA	NA	NA
	College	NA	NA	NA	NA	NA
	Department	1.0	1.0	1.0	1.0	1.0
Percent of courses with adequate completion (adequate compl = 70%+, A, B, and C grades)	University	83.6	83.3	85.0	84.7	85.6
	College	91.0	92.6	90.2	89.3	90.1
	Department	91.7	93.8	93.5	94.5	94.2

Information Regarding Current Review Team Members:

1. Dr. Barry Hallsted, Ph.D. – Associate Professor, Utah Valley University, hallstba@uvu.edu
2. Dr. Allyson Saunders, Ph.D. – Assistant Dean, Engineering, Applied Science and Technology, Weber State University, asaunders@weber.edu
3. Slade Opheikens, Subcommittee Chair – Curriculum & Accreditation - Industry Advisory Board, R&O Construction Company, sladeo@randoco.com
4. Matt Brower, Chair – Industry Advisory Board, Sure Steel, Inc., MBrower@suresteel.com