



Docket Item:

Community College Approval: Portland Community College, Associate of Applied Science in Construction Management, within 46.0412 - Building/Construction Site Management/Manager.

Summary:

Portland Community College proposes a new AAS degree in Construction Management. Higher Education Coordinating Commission (HECC) staff completed a review of the proposed program. After analysis, HECC staff recommends approval of the degree as proposed.

Staff Recommendation:

The HECC recommends the adoption of the following resolution:
RESOLVED, that the Higher Education Coordinating Commission approve the following degree: AAS in Construction Management.



Portland Community College seeks the Oregon Higher Education Coordinating Commission's approval to offer an instructional program leading to a degree in Construction Management.

Program Summary

The Construction Management AAS provides students with the technical knowledge, management skills, and qualifications necessary to secure employment in a management capacity within the construction industry. The curriculum prepares students for entry level management and supervisory positions in the residential and commercial fields of construction, offering classes in estimating, scheduling, construction law, safety, building systems, materials and methods of construction, blueprint reading, and project management. Graduates may be employed as project engineers, estimators, schedulers, project managers, field supervisors, owner's representatives, developers, and general and specialty contractors.

1. *Describe the need for this program by providing clear evidence.*

The Building Construction Management Industry Advisory Council has indicated there is a great need for trained construction management personnel. Enrollment has reached maximum capacity for several years and has been strong for the last 11 years. The program leads to jobs in the field with competitive wages. Nearly all of the graduates find work in the Portland Metropolitan area even before they complete the program. Recent graduates are very quickly hired to fill positions immediately upon graduation and sometimes before they've earned their degree. Recent graduates have been placed in positions as Project Engineers with salaries ranging from \$50,000 to over \$70,000. As per OLMIS: Employment in this occupation in 2014 was much larger than the statewide average for all occupations. The total number of job openings is projected to be somewhat higher than the statewide average number of job openings for all occupations through 2024. This occupation is expected to grow at about the statewide average growth rate for all occupations through 2024. Reasonable employment opportunities exist largely due to the significant number of job openings projected for this occupation. Program completers can expect to earn \$50,000-100,000 per year depending on their experience. Employment Statistics for Construction Managers Oregon, Statewide, May 2016 Current Number Employed: 4,690 up from 2,740 in 2012 Number per 1,000 Jobs in the State: 2.618 up from 1.73 Annual Mean Wage: \$94,300 up from \$80,250 Hourly: \$45.34 up from \$38.58.

2. *Does the community college utilize systemic methods for meaningful and ongoing involvement of the appropriate constituencies?*

The Construction Management AAS was developed by the request of, and in collaboration with, the Building Construction Management Industry Advisory Board who lobbied for and provided suggestions for required curriculum. The department and the industry advisory board meet regularly to share information about the industry and to suggest new curriculum or changes to current curriculum.

Collaboration between PCC's Building Construction Technology (BCT) extends to educators at the collegiate and high school levels. The BCT program works very

closely with the faculty at Forest Grove and St. Helens High Schools to ensure that the secondary school programs align with the college programs. Students are able to earn dual credit at these two schools and the coursework provides them a "jump start" to the PCC Building Construction Program's degrees and certificates. The collaboration/alignment offers a bridge for a variety of students toward a career as a construction manager.

The program works with Women in the Trades and does outreach to high school students and encourage all gender identities to participate. Currently the program has a higher percentage of enrollment identifying as female than is represented in the trades and in the construction industry. The female graduates have been among the most sought after by employers. We talk with students who do not identify within the binary definitions of male/female that there is a place for them in construction industry and we have had several students who identify this way come through our courses. We actively advertise to encourage women to join the program. 25% of our full-time faculty are female.

Building Construction Technology as well as all programs at PCC are proactive at creating a welcoming and supported environment for all students regardless of the ethnicity, ability, and gender identification. The college has resources available to students with no cost to them including, Disabilities Services, Multicultural Center, Women's Resource Center, Equity and Inclusion Office, childcare, ESOL, college prep courses, and many other resources for students. The BCT program actively participates in activities around the region to recruit more students of color and students who are non-dominant culture, to enter the construction field and the management field which is a key aspect of industry. The program enrolls many Veterans, many who self-identify as suffering from PTSD. The program personnel actively work with these students, and they have found success in the program.

3. *Is the community college program aligned with appropriate education, workforce development, and economic development programs?*

The Building Construction Technology program has dual-credit arrangements with Forest Grove and St. Helens High Schools. The degree program is aligned with PCC College Core Outcomes (CO). Our graduates are committed to contributing to their community and to being responsible builders (CO: Community and Environmental Responsibility). The graduates are committed to a professional work ethic, and are challenged to consider their own place in the world and to examine what contributes to the success of themselves and their projects (CO: Professional Competence, Cultural Awareness, Self-Reflection). Another important personal trait built into the program include communication skills (CO: Communication). Construction Management requires a strong sense of responsibility and problem solving (CO: Critical Thinking and Problem Solving, Self-Reflection) and the ability to manage time, resources, and others effectively.

The Building Construction Program/Construction Management provides a smooth articulation from high school graduate to college graduate. High school graduates can enter the program and within two years they will be prepared for an entry level

position in the construction industry and while in the program they will likely meet possible future employers.

PCC has a strong presence in the metropolitan community. Recruiting happens at high schools, middle schools and community events and regional fairs. Citizens are aware of the career technical training opportunities available at Portland Community College.

The program design focuses on the potential career ladders for current and former students. Due to the input of the industry advisory board the curriculum is regularly revised to include new technology and skills adopted by the industry. The career path (career ladder) is clearly defined by the industry and the program works directly with employers to ensure that all PCC students are knowledgeable about potential job options which will be available to them.

4. Does the community college program lead to student achievement of academic and technical knowledge, skills, and related proficiencies?

The Construction Management program is designed with sequential courses, each building upon the prior course. Most students follow the sequence due to rigorous advising by the Perkins funded advisor. The students in the program are in a cohort, and their instructional experience is guided in an ascending pathway throughout their experience. Student learning outcomes are clearly stated for every course. The program is designed and managed to develop foundational and then summative skills. Student work for which forms the basis for a job seeking portfolio.

The program includes unique identifiable content area courses which allows for students with prior experience to work with advisors to assess prior knowledge. All courses are scheduled in the evenings which allows full-time, part-time and working students to attend classes. Foundational and soft skills, which are heavily encouraged by the industry advisory council, have been woven into many courses. Those foundational courses are communication, computer applications, and project management, as well as general education.

The Construction Management program was designed to provide students the dual opportunities of entry-level employment or continuing their education at a four-year university. The instructional model of the courses varies and includes classroom lecture, online, lab-based group work, and a mixture of lecture, group and individual projects. Students have the opportunities to develop academic and technical skills needed for the workplace and critical thinking and soft skills essential to success in any career, but particular to construction management.

The BCT faculty are committed to providing a rigorous, challenging environment for learning that is non-traditional and student centered. The faculty engages students in discussion, pose hypothetical questions with no single answer, and create discussions in the class that directly relates to the complexities of the workplace.

The faculty are committed to providing free course materials for some courses and are looking into ways to expand the open education resources (OER).

Some of the required courses and many of the elective courses are lower-division collegiate which guarantee transfer to a university. Some of the students take advantage of the direct pathway to Oregon Tech and earn their Bachelor's degree in Technology and Management or Operations Management.

The required courses lead to student achievement of academic and technical knowledge, skills and related proficiencies as expected by the building construction

and construction management industries. The course and program outcomes align closely with the course content and industry expectations for entry level employment. All courses in the program are offered at the Rock Creek campus of Portland Community College. The program is open-enrollment which means that students need not apply to the program prior to taking courses.

The college has a rigorous assessment and evaluation process to determine how well students meet course outcomes and certificate outcomes. Students who complete their program will be evaluated to determine how well they meet the outcomes. Data resulting from outcome assessment is used for program improvement and improved student learning.

5. ***Does the community college identify and have the resources to develop, implement, and sustain the program?***

The college has the capacity to support the program, as Construction Management AAS is not a new program. We are submitting a state application so that the AAS can be a stand-alone AAS, not a degree option. The classroom and classroom, shop and lab space are readily available as the college has a strong Building Construction Technology program and has had one for many years. The current classroom, shop and lab facilities as well as the specialized equipment will be sufficient to support the program. Current financial resources are adequate to support the Construction Management program, no new faculty or staff will be hired. The CM program works directly with area employers to provide cooperative education and internship opportunities.

All PCC students have access to career counseling, academic advising and instructional support. The college provides full service library services at three campuses in the district. The college is committed to maintaining a complete catalog of lower division collegiate courses to accommodate students earning a degree or certificate and preparing to transfer to a university.

The college has an open access policy, which ensures access for all individuals. PCC serves students with special needs including those with disabilities, displaced workers, and non-native speakers of English. Services include the provision of tutors, counselors, child care, financial aid, and ESL instruction. Other services may include interpreters and communication devices for deaf and hearing impaired students, note-taking options, taping of printed materials, test readers/writers, enrollment assistance, career guidance, and corrective physical education. Staff and students has have access to consultations and workshops designed to increase awareness of disability issues. PCC as a public agency provides comprehensive services for students with disabilities in both the classroom and online formats. The college has a Disabilities Services Office: <http://www.pcc.edu/resources/disability/>

PCC supports diversity in the student body and employment. The PCC Office of Equity and Inclusion provides leadership to facilitate, manage and coordinate college policies, procedures and programs related to diversity, inclusion and equity: <http://www.pcc.edu/about/equity-inclusion/>

Assurances

Portland Community College has met or will meet the four institutional assurances required for program application.

1. *Access.* The college and program will affirmatively provide access, accommodations, flexibility, and additional/supplemental services for special populations and protected classes of students.
2. *Continuous Improvement.* The college has assessment, evaluation, feedback, and continuous improvement processes or systems in place. For the proposed program, there will be opportunities for input from and concerning the instructor(s), students, employers, and other partners/stakeholders. Program need and labor market information will be periodically re-evaluated and changes will be requested as needed.
3. *Adverse impact and detrimental duplication.* The college will follow all current laws, rules, and procedures and has made good faith efforts to avoid or resolve adverse *intersegmental* and *intra-segmental* impact and detrimental duplication problems with other relevant programs or institutions.
4. *Program records maintenance and congruence.* The college acknowledges that the records concerning the program title, curriculum, CIP code, credit hours, etc. maintained by the Office are the official records and it is the college's responsibility to keep their records aligned with those of the Office. The college will not make changes to the program without informing and/or receiving approval from the Office.