

Docket Item:

Community College Approval: Portland Community College, Business and Industry-Based Associate of Applied Science Degree in ThinkBIG Caterpillar Electric Power, within 47.0605, Diesel Mechanics Technology/Technician.

Summary:

Portland Community College proposes a new Business and Industry-Based Associate of Applied Science Degree in ThinkBIG Caterpillar Electric Power. 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: BAAS in ThinkBIG Caterpillar Electric Power.



Portland Community College seeks the Oregon Higher Education Coordinating Commission's approval to offer an instructional program leading to a Business and Industry-Based Associate of Applied Science Degree in ThinkBIG Caterpillar Electric Power.

Program Summary

The ThinkBIG AAS prepares students for a position as a Caterpillar Electric Power Generation (EPG) technician. The AAS is a partnership between PCC and Caterpillar dealerships in the western region. Caterpillar employees are recommended by their dealership to apply to the EPG program. The ThinkBIG EPG program is not open enrollment, only individuals recommended by their local Caterpillar dealership may apply and be admitted. The curriculum for the AAS includes diesel motors, electrical theories, industrial blueprints and schematics, AC/DC motor principles, electric motors, engine fuel systems, hydraulic fundamentals, and electric power generation theories and principles. The AAS requires 12 credits of internship which students will complete at their local Caterpillar dealership where they are employed.

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

The Dealer Service Technology Advisory Council has expressed a great need for skilled diesel machinery technicians to service electric power generators. Currently the positions can only be filled by either 1) hiring from out of state or 2) by the dealerships investing years of internal training for their existing technicians. The training requires an enormous investment of time and resources by the dealerships. The dealerships want to free up their time and resources by partnering with Portland Community College to provide the training through the Dealer Service Technology department. Electric power generation is an expanding industry, as each year the need for reliable and un-interruptible power increases. With that expanding industry, the need for qualified service technicians increases proportionately. According to Qualityinfo.org, the projected increase is 14.1% for this related service industry from 2018 - 2027. This occupation is expected to grow at about the regular average growth rate for all occupations through 2027. Program completers can expect to earn \$17-29 per hour depending on their experience the median wage is \$25.77.

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

The Caterpillar Electric Power-ThinkBIG program was developed in collaboration with two PCC programs, Dealer Service Technology, which services the Caterpillar machines and dealerships, and Apprenticeship and Trades Technology which will provide a foundation of coursework in alternating current principles and theory necessary for understanding electric power. The Dealer Service

Technology Advisory Council are important collaborators in the shape and scope the Caterpillar Electric Power-ThinkBIG AAS degree. The college and the Advisory Council met several times to clarify the needs, goals and course content, and the council provided valuable feedback as curriculum was developed and vetted.

Dealer Service 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 many 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.

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

The Caterpillar Electric Power-ThinkBIG program supports workforce and economic development initiatives for the state and beyond. The program was developed with industry guidance so that the curriculum outcomes are aligned with industry needs. The program will prepare students to transfer smoothly from student to employee. The program is aligned with Caterpillar dealers throughout the Northwest, including Alaska, Idaho, Washington and Oregon. Caterpillar Dealerships provide internships for any student in the Dealer Service Technology program as well as the Caterpillar Electric Power-ThinkBIG program. PCC has had a very long-term relationship with the Caterpillar Dealerships and serves both the industry and the college very well.

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

The Caterpillar Electric Power-ThinkBIG program is designed to meet the needs of students new to the industry and past graduates working in dealerships who wish to return to PCC for electric power specific instruction. The first 46 credits that make up the AAS mirror the first 46 credits of the Dealer Service Technology AAS. This allows the existing courses to be shared with the two degrees and used to their full potential. The second half of the program, 40 credits, is dedicated to specific electric power related courses. Furthermore graduates of the Dealer Service Technology program who wish to achieve their Caterpillar Electric Power-ThinkBIG AAS degree simply need to return to PCC and complete the second year courses to achieve the Electric Power ThinkBIG degree. The required courses lead to student achievement of academic and technical knowledge, skills and related proficiencies as expected by the dealer service industry. The course and program outcomes align closely with the course content and industry expectations for entry level employment.

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. Instructional methods used for the program coursework reflect best practices in education. The electric power courses have been developed to provide students with appropriate sequencing of information and the later courses are built upon, and advance the skills and knowledge, covered in the early courses. The program follows a specific scheduling sequence to insure student's acquisition of skills and knowledge.

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 new AAS. There is a new building, at the Rock Creek Campus slated to be complete by the fall of 2020, which is designated specifically for the ThinkBIG program and students. This building has been specifically designed to meet the industry standards for training students for work in this field. The building will be outfitted with the equipment needed to provide the most up-to-date education available in the electric power generation field. The new space will adequately supply both area for lab work, as well as classroom work.

PCC has an extensive list of electric power generation equipment that has been donated and purchased for use in this program including generators, automatic transfer switches, test equipment and diagnostic tooling. Furthermore, our sponsoring dealer network has pledged support by the means of supplying loaner equipment for use in labs, proprietary technology and software, test equipment, continued donations, and continuing education opportunities for faculty. Current financial resources are adequate to support the Caterpillar Electric Power-ThinkBIG AAS program, no new faculty or staff will be hired.

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.