

Docket Item:

Community College Approval: Tillamook Bay Community College, Associate of Applied Science Degree in Agriculture Technology, within 01.0205 – Agriculture Mechanics and Equipment/Machine Technology/Technician.

Summary:

Tillamook Bay Community College proposes a new Associate of Applied Science Degree in Agriculture Technology. 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 Agriculture Technology.



Tillamook Bay Community College seeks the Oregon Higher Education Coordinating Commission's approval to offer an instructional program leading to an Associate of Applied Science Degree in Agriculture Technology

Program Summary

Are you interested in troubleshooting, working outside, working on farm equipment, and interacting with animals? The Associate of Applied Science in Agricultural Technology may be the program for you. By completing this degree, you will be qualified with the necessary skills and knowledge to work as a technician on farms; specifically to troubleshoot and repair robotics on farms and/or work in precision agriculture. In this degree, you will learn a variety of skills ranging from hydraulics and pneumatics to large animal handling, welfare, and nutrition.

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

Standard A - Need: Provide clear evidence of the need for the program (labor market research, employment demand, competitive wages and wage progression).

- 2017 Employment
 - 1,275
- 2027 Employment
 - 1,425
- Annual Replacement Openings
 - 127
- Total Annual Openings
 - 142
- Median Hourly Wage
 - 21.45
- Average Annual Salary
 - 45,020
- Middle Hourly Range
 - NA
- Statewide Employment Analysis
 - Employment in this occupation in 2017 was similar to most occupations across the state. The total number of job openings is projected to be similar to job openings for most occupations in Oregon through 2027. This occupation is expected to grow at about the statewide average growth rate for all occupations through 2027.

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

1. Who are your key constituents and how have they helped design your program?
The program was designed and built with Tillamook Area Dairy Farms and para-farm companies. The technological and dairy science courses were vetted and approved as required. Tillamook is a farming county with nearly 100 dairy farms. Technology in farming is on the rise. The program was developed with a forward facing perspective considering the changing landscape in farming. Advanced pneumatics and robotics are taking over the industry. This program provides instruction in agricultural technology while providing a solid foundation of dairy and horticulture science. This combination provides students with the knowledge base to perform work in a farm while keeping pace with technological advances.
2. What resources are your constituents contributing?
The partner farms and companies will contribute equipment, materials and intellectual property as needed in the program.
3. What college programs are helping you shape and implement your program, e.g., student services, developmental education, second language programs?
The manufacturing program, student services, OSU Agricultural program, and the SNAP/STEP program are supporting the program.
4. Do you have national constituents involved in program design and resource sharing?
Yes, Delaval, Lely, and Motion Flow and Control all have representation on the advisory committee.
5. How will this program meet your partners' needs?
Training in Agricultural Technology will support the local farms and provider companies in Tillamook County with the next generation of employees. This growing market will need more employees over time.

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

1. How have key constituents been systemically involved in the development of the proposed program?
The constituents were involved with the primary conception in this degree and worked with the coordinator to select classes that fit the market need. The overall advisory committee vetted and approved the class selection and competencies.
2. What other programs could benefit students if the instruction and outcomes were aligned with this new program?
The manufacturing program and the agriculture transfer degrees would benefit.

3. Does the program meet education, workforce development, and economic development activities and priorities?

It does. The program addresses the desired competencies in agricultural science, technical knowledge, and advanced technology.

4. How does this program support Oregon's educational initiatives?

The program is really a one of a kind in its design. Robot milking and advanced farming are newer business opportunities in the state. This two-year degree meets state educational initiatives by providing a short term training track to good paying jobs in a fields that will only grow over the next decade.

5. How does this program support the larger context of workforce education needs and state and national initiatives?

High tech high wage jobs are the targets of the next generation workforce initiatives. The skills learned in the program translate to jobs in growing categories and address many sector initiatives with the local workforce group by providing innovative training in robotics, programming, and drones.

6. Are there articulation agreements in place for students in high school to receive college credit?

In the existing degree, Students can earn up to 31 credits towards the degree depending on the participating high school.

7. Are there articulation agreements in place for program credits to be transferred to other colleges and other post-secondary education and training opportunities?

Since it is a new degree, there are not; however, work will be done to create articulation with OIT for junior status in an engineering or management program. Similar articulation exists with the other AAS degrees.

8. As a result of this program, what professional certifications or license exams will the students be prepared for?

Depending on the courses taken, students will earn the 14CFR Part 107 UAS Commercial Drone Pilot License, and be prepares for the Lely Astronaut robot certifications.

9. Is the program designed to accommodate employment opportunities for students through attainment of incremental proficiencies and certifications?

As competencies become more developed, these pathways will emerge.

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

1. Is the program designed to meet the need stated in Standard A?

Yes, the program was built to address the growing need in agricultural tech. Currently there is a skills gap growing as the technology and use spreads.

2. Are learner outcomes clearly identified?

Yes, all the courses have clear learning outcomes mapped to program and institutional outcomes and were vetted and approved by the college curriculum committee in December 2019.

3. Does the program facilitate student achievement and transition?

The program does in that graduates will be participating in Cooperative Work Experience with the same farms and companies on the advisory committee. These companies have pledged to participate in the CWE portion to help place graduates directly in the field.

4. How are career information and counseling incorporated? Are tutoring and mentoring provided?

Career information and counseling starts in the high school. Across Tillamook county High Schools, there is a tremendous Agricultural presence. There are dual credit Ag. Classes. The Dean over the program meets with students. The OSU Agriculture Coordinator meets with the students and the colleges participates in countywide counselor meeting to ensure information is disseminated to all the students. Within the program, an advisor is assigned to the student, and Tutoring (both in-house and online) are provided to all students in all programs so students can get help on their schedule.

5. What internships, work-study and employment opportunities are provided for students?

All students are required to participate in a 90 hour CWE 280 Class. Students are placed into one of the companies who participate in the advisory committee. This helps all student to apply his or her learning on real time.

6. How will data be used for continuous program improvement?

Enrollment and completion data are used to help with advising. Course outcome completion data is used each term to close the loop and create better instruction.

7. How is academic and technical rigor addressed?

Academic rigor is monitored through the college's assessment database and the curriculum process. This process looks at outcome assessment and makes sure the classes uphold the rigor standards of the other programs. The members of the advisory committee address technical rigor through the examination of the competencies and technical knowledge.

8. Are schedules appropriate for working adults?

Classes are scheduled in the evenings and online allowing a high degree of flexibility for students who need to work and still want to participate in college courses.

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

1. What impact will this program have on current school programs and budgets?

Very little, the program is a blend of agriculture and technical courses already taught in existing programs. There is only one or two new classes.

2. What is the student/teacher ratio?

10-1

3. Will course fees support the cost of instruction; if not, how will revenue be generated?
Yes, course fees will support this program. It is also a part of the Ag Program of Study.
4. What additional facilities, tools, supplies, equipment and staffing are required?
The facilities and staffing are already in place. So are all the classrooms. The Advisory Partners will provide new technology.
5. What in-kind and financial resources are available from partners?
None at this time.
6. What opportunities have been identified to extend student learning beyond the classroom?
Students will have multiple opportunities to work in the field during the coursework. The program is specifically aligned with the new agricultural technology. Class trips to installations, site visits and hands on training on the farms are planned during instruction.

Assurances

Tillamook Bay 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.