



Docket Item:

Community College Approval: Lane Community College, Associate of Applied Science in Commercial Unmanned Aerial Systems, within 49.0102, Airline/Commercial/Professional Pilot and Flight Crew.

Summary:

Lane Community College proposes a new AAS degree in Commercial Unmanned Aerial Systems. 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 Commercial Unmanned Aerial Systems.

Lane Community College seeks the Oregon Higher Education Coordinating Commission's approval to offer an instructional program leading to a degree in Commercial Unmanned Aerial Systems.

Program Summary

Students will learn how to operate unmanned aircraft and analyze data into commercial grade deliverables consistent with current industry standards through use of advanced imagery and multiple unmanned aerial platforms.

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

- According to the recent "Federal Aviation Administration Aerospace Forecast for 2017-2037", Unmanned Aerial Systems are expected to grow from 29,000 pilots (December 2016) to over 422,000 by 2021. That's a 1400% increase nationally in the immediate future.
- The majority of the current jobs are in research and integration into the National Airspace, but in this same Federal Aviation Administration report they estimate that the major job leap will occur in 2019 as unmanned delivery type operations begin to come into play.
- AUVSI (Association for Unmanned Vehicles International) predicts that by 2025 the Unmanned Aerial Systems market will have a \$59 Million direct impact in Oregon alone with over 600 jobs within the state.
- Nationally AUVSI predicts that 103,776 new jobs will be created, with 844,741 job years worked over the 2015-2025 period. They state that, "[Their] study demonstrates the significant contribution of Unmanned Aerial Systems integration to the economic growth and job creation in the aerospace industry and to the social and economic progress of the citizens in the United States."
- Current training programs in Oregon will not be able to keep up the pace of this progression and a need for an aviation training facility is pertinent in Oregon higher education. There is currently only one accredited program in central Oregon who trains Unmanned Aerial Systems pilots.
- According to Indeed.com, current jobs in Unmanned Aerial Systems average about \$60-70,000 for the contiguous United States (CONUS) and over \$100,000 for Outside the CONUS military contract work.

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

The Flight Technology program has connected with a number of local area high schools to assess interest in the UAS program and has been in contact with other institutions that are current filling the need in their respective local area. It has become readily apparent through these contacts as well as the information provided by state and national data on the needs for these programs to support aerial photography, agriculture, fire suppression, mapping, surveying, GIS, and other industrial demands.

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

1. *Direct beneficiary programs include:*
- a. *Flight Technology*
 - b. *Geographic Information Systems*
 - c. *Engineering*
 - d. *Photography*
 - e. *Business Management*
 - f. *CIS*
 - g. *Drafting*
 - h. *Various Others would see an indirect effect.*

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

- Students will learn to fly multiple complex Unmanned Aircraft Systems through a Training Course

Outline with progress and proficiency checks

- Students will earn their Unmanned Aerial Systems Commercial License and Private Pilot License
- Learning outcomes are identified by licensing completion and adherence industry standard proficiencies.
- All students must pass all Flight Tech courses with a "C" or better and maintain Flight Tech minimum GPS of 2.0 cumulative.
- Additional academic skills include crew resource management, informal research, computer skills, task management, and human factors. Student proficiencies are assessed based on industry standards for academic achievement.
- Continuous improvement planning will be based on outcomes from both qualitative and quantitative student performance data.

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

- The need for flight instructors in this program will be supported with the current Commercial Aviation program that has been established for several decades.
- Thanks to the continuing education department, some of the Unmanned Aerial Systems classes have already been developed and the rest are currently due for completion in January 2018.
- Sustainability comes from the collaboration with the local high schools and the upcoming Program of Study currently being drafted. The flight Tech department has staff currently teaching classes at one high school this winter with plans to teach another new program in 2018 with another Eugene School. There are several others in the valley that are already hosting highly successful high school level clubs and programs that this college program will draw from.
- We've also seen involvement from local utility companies who have started an Unmanned Aerial Systems division within their company. LCC instructors have taught these companies through the continuing education department with great success.
- Community clubs already have an established radio controlled field in which to fly Unmanned Aerial Systems as well as several large indoor facilities on campus for indoor flying.

Assurances

Lane 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.