

Docket Item:

Community College Approval: Lane Community College, Certificate of Completion in Wildland Fire Management within 03.0506 Forest Management/Forest Resources Management.

Summary:

Lane Community College proposes a new Certificate of Completion in Wildland Fire 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: CC in Wildland Fire Management.



Lane Community College seeks the Oregon Higher Education Coordinating Commission's approval to offer an instructional program leading to a Certificate of Completion in Wildland Fire Management.

Program Summary

This program prepares students for fire management positions with the Bureau of Land Management, the US Forest Service, private agencies, non-profit organizations, and local community groups. It emphasizes the use of fire as a management tool for restoration ecology as well as the role of fire in regional ecosystems. It integrates the study of forest ecological principles, fire science, fire policies, public communication, and management issues to prepare students for more advanced positions and further study in wildland fire management.

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

1. Does the workforce data show that the program is needed?

The Forest Service employs approximately 10,000 personnel who serve in various positions within our wildland fire program. Positions include wildland firefighter, dispatcher, prevention technician, fuels management, and more. (<https://www.fs.usda.gov/working-with-us/jobs/fire>) More locally a Fire Management Officer on the Middle fork Willamette National Forest stated: "On average we hire between 1000-1500 temporary employees across the USFS in region [OR and WA] during our centralized and largest hiring event in February. That hiring range includes fire and non fire but a large percentage is at the entry level. Fire positions encompass around 50% of that number in a given year ranging from 500-700 positions."

2. Can training currently be provided without creating a new program?

Current training exists through the National Wildfire Coordinating Group (NWCG). The proposed program combines skill-based fire techniques with an understanding of fire's holistic role in the environment to help students develop the knowledge and skills needed to solve complex problems involved in the management of natural resources.

3. What data sources have been used in addition to the Employment Department, e.g. professional organizations, national census and regional workforce specialists?

Firefighters United for Safety, Ethics, and Ecology (FUSEE, <https://fusee.org/>), regional assistant fire management officer, and Lane ESD employment research as part of their CTE planning and programming process.

4. What employment opportunities, career advancement and opportunities for additional training exist for students who complete the program?

Many wildland firefighting jobs are temporary and seasonal. These temporary positions are traditionally leveraged to acquire permanent positions in this field (single season, returning seasonal, full-time permanent). Privately Contracted Fire positions can range from single event (common) to long-term employment (rare).

Permanent positions with state and federal agencies require a higher level of education or experience. The wildland fire, forest biology, and GIS courses meet requirements for higher-level positions, and are applicable for advanced study.

This program emphasizes ecological fire management, and prepares students to work with fire to recycle fuels, rejuvenate habitats, and restore ecosystems, rather than simply focusing on fire suppression. There is increasing recognition that the use of science in the management of wildfires, and in the crafting of policy related to wildland fire management, is essential for sustainability. Certification is a desired qualification, and hiring criteria for individuals looking for work as: Conservation Scientists / Park Ranger, Forest / Conservation Technician, Logging Worker / Arborist / Faller

--Demand for forest fire inspectors and prevention specialists is expected to grow 24% from 2019 to 2029 based on US Bureau of Labor Statistics (<https://www.bls.gov/emp/>)

--Demand for Fire and Fuel Managers is expected to grow 7% between 2020 and 2030 based on US Bureau of Labor Statistics (<https://www.bls.gov>)

--In Oregon, employment is expected to grow at about the statewide average growth rate for all occupations through 2029. (Oregon Employment Department)

--In Lane County, there were 384 fire technicians, 396 Forestry, and 237 Environmental/Natural Resources Management and Policy job postings in the last 12 months. The number of jobs is expected to grow over the next 10 years. (Burning Glass report sourced 10/2021)

--Currently, Fire Science/Prevention programs exist at 9 other Oregon community colleges. The proposed program is unique in that it focuses on ecological fire management and sustainability.

--Salary range: from \$34,000 for workers to \$41,000 for managers.

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

The development of the Wildland Fire Management Program was done in conjunction with the director of Firefighters United for Safety, Ethics, and Ecology and representatives from the Lane Educational Services District (including regional High School CTE teachers) to ensure the program components address ecological fire management with an emphasis on controlled burning to manage fuels. Specific attention was given to ensuring that this certificate would serve as a way for High School students to

earn credit towards completion, bridging students to Lane Community College. Internally to the college we have consulted with High School Connections to ensure that students have a path from high school to a local community college CTE degree that addresses regional needs. Consultations with Career Pathways and Curriculum helped identify optimal program structure to ensure that there was financial aid qualification without overburdening students. Both Social Science and Science, Math, and Engineering departments worked on this proposal with administrators as well as faculty.

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

The collaborative development of this program with representatives from regional high schools through the Lane Educational Service District and director of Firefighters United for Safety, Ethics, and Ecology and multiple academic departments at Lane Community College (LCC). Multiple high school CTE teachers will be able to connect students in their programs. The field day component will be shared between regional high schools and students in the program. By including these partners we ensured that the range of students who participate in this program can come from regional high schools to firefighters that are looking to develop an understanding of ecological fire management. Additionally there is potential overlap between multiple programs that exist at LCC currently. Geographic Information Systems and Commercial Unmanned Aerial Vehicle students can combine studies to specialize in fire mapping and remote sensing applications. Two classes in this certificate (BI 103J and GIS 151 transfer to OSU and UO) and articulation agreements will be pursued for FIRE 100 and FIRE 200. Students that come into the program already qualified through the National Wildfire Coordinating Group can receive credit for prior learning for 6 of the 24 program credits and can complete the program in two terms (Fall and Winter). This will include regional CTE students that work to qualify as part of their high school curriculum. Students who do not come in with National Wildfire Coordinating Group (NWCG) qualification will take part in five wildland firefighting training courses and a field day to become qualified.

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

Design: The program is designed to meet the growing need for fire managers with both skills-based fire techniques and an understanding of fire's holistic role in forest restoration.

--Technical skills include quantitative and qualitative analysis of forest fire fuels (measurement, inventory, and classification), interpretation of spatial data using physical and digital maps (GIS). Field skills are developed through a hands-on field day in partnership with Lane ESD.

--Scientific concepts in classroom-based coursework include forest ecological principles, natural history of fire-adapted forest species, ecosystem services, and restoration ecology.

--Additional academic skills developed through a seminar series include research,

communication, and computer skills with an emphasis on understanding economic and ecological tradeoffs and social controversies associated with wildland fire management. The seminar series includes preparation of job applications and guest speakers from local employers.

--Tutoring is available through LCC's tutoring services, with additional resources for science coursework available through the STEM Learning Zone.

--Continuous program improvement will occur through LCC's formal Academic Program Review process, which evaluates whether educational objectives are consistent with the college's mission or purpose; the achievement of students in relation to the intended educational outcomes identified; the extent to which the college regularly uses the results of program review for improvement of its programs and services.

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

The Science, Math, and Engineering Division at LCC has the resources and capacity to develop, implement, and sustain the Wildland Fire Management Certificate.

--The program will have a minimal impact on the division budget. An existing full-time faculty member will serve as the program coordinator, and the part-time faculty budget is sufficient to meet the needs of the new courses that will be offered.

--Enrollment is expected to grow to ~25 students per cohort by year 3 of offering, with tuition supporting the cost of instruction.

--No additional facilities, tools, supplies, or equipment are required for the program to successfully launch and operate.

--Remaining materials from the discontinued Watershed Science AAS program are available and applicable to the Wildland Fire Management program. These materials were purchased with Perkins funding, and would be used in the FIRE 200 course for the measurement and hands-on application portions of the course.

--The partnership with Lane ESD also provides equipment and supplies for FIRE 130, NWCG Basic Firefighter Field Day.

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.