

Docket Item:

Community College Approval: Lane Community College, Associate of Applied Science Degree in Cybersecurity, within 11.1003, Computer and Information Systems Security.

Summary:

Lane Community College proposes a new Associate of Applied Science Degree in Cybersecurity. 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 Cybersecurity.



Lane 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 Cybersecurity.

Program Summary

This degree is an AAS degree program that prepares students with the knowledge and applicable skills necessary for entry-level careers in cybersecurity. Students will acquire foundational knowledge in computer science and information technology, in order to build solution-oriented skills in infrastructure security, enterprise risk and risk management, cloud computing, cryptography, information assurance, digital forensics, penetration testing, and business continuity. Students will apply this knowledge both in a hands-on lab curriculum and through required internships supporting the local community. In addition, this degree will provide the core foundational knowledge to continue on to a bachelor's degree in cybersecurity and related areas for even further opportunities for career advancement.

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

The role of the security administrator/security specialist does exist and is in demand, as the cybersecurity field has different levels of jobs and each serves a specific purpose or purposes. Information technology career paths faced the same problems a couple of decades ago, but has evolved into a field with many different roles available. With that said, some data is an estimate based on comparison between the information security analyst (higher level) and network/systems administrator (equivalent classification on the information technology side).

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

We have been collaborating with a variety of stakeholders, both internal and external of the college. Internally, we have been working closely with the Curriculum Development office to ensure all information is being collected and documented correctly. Other faculty within CIT have been engaged and are active advisors during the development process and will continue after degree approval. Cooperative education has been a strong partner through this process, providing much-needed consultation and assistance in determining program relevance and industry support for internship and employment opportunities. Externally, we have engaged with the CIT Advisory Board and other local businesses in order to gather valuable input and support. We conducted a survey to gather feedback from the Advisory Board and other local businesses and received excellent feedback about the proposed degree program.

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

The proposed AAS in Cybersecurity aligns with Lane's vision, mission, and core themes. It is designed to provide a quality learning-centered experience that promotes the success of our students.

- **Core Theme 1: Responsive Community Engagement:**
CIT has an advisory board made of representatives from various industries in the local area. When surveyed, there was a positive affirmation that internship opportunities will be available for students in this program. In working with cooperative education, there have been requests within the last academic year for students interested in cybersecurity internships from local companies, which reinforces that opportunities will be available.
- **Core Theme 2: Accessible and Equitable Learning Opportunities:**
This program supports the college's efforts to introduce and support equity in all curriculum. Access to the program will be designed in such a way to be inclusive of all, recognizing that all students have something to contribute. Materials will be made available in alternate formats (where feasible) to ensure that students have equal access. Materials will be produced in such a way to encourage women, minorities, and people with disabilities to consider occupations within cybersecurity.
- **Core Theme 3: Quality Educational Environment:**
This program is unique in the Willamette Valley. It provides a career path in cybersecurity which fills a critical gap in the local community. Our programs have continuously met the needs of the local area by providing them with a pool of candidates that are exceptional. Through our stringent program-review process, we are constantly striving to improve and update programs to maintain relevancy and currency with the changing workplace. We have implemented many innovative learning tools and modern technology into our programs in CIT, with the goal of creating an environment that encourages collaboration and provides flexibility to provide a quality learning environment that meets the different ways in which our students learn.
- **Core Theme 4: Individual Student Achievement:**
Our graduates enter the workplace as valued employees. Graduates are also prepared to move on to meet any additional educational goals they may have at the university level. Cybersecurity is a field that requires a person to always learn. Technological changes, both attack and defense, require consistent research and training. Because of this, the AAS provides a solid foundation that prepares the graduate to enter the workplace and simultaneously continue their education to progress in the field.

Stackable credentials:

The next logical step is create additional CPCs to provide targeted skill development and to complement other degree programs within CIT where students are looking to develop specializations.

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

This is not just another IT degree. This degree is designed to produce knowledgeable security administrators that are proficient in many of the core areas of cybersecurity. This is the "boots on the ground" person who can handle routine tasks, freeing more experienced personnel to focus on advanced tasks yet is capable in situations where their knowledge places them above their peers within

IT. We have engaged with the CIT Advisory Board in order to gather valuable input and support. We conducted a survey to gather feedback about the proposed degree program from the Advisory Board and received excellent feedback that was overwhelmingly positive. Since the advisory board is composed of representatives of organizations that employ our graduates, their input is critical to this process. Many local companies have confirmed they would like to provide internships. Many of these same businesses said they planned on hiring at the two-year education level in the coming years. These are the same companies that consistently hire graduates from existing CIT programs.

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

No additional resources will be necessary, beyond what is currently available to support other programs within the department. Course development will be minimal, as many of the courses in the proposed degree program are already available. Additional course development will be performed by assigned faculty in the course of their normal duties. The target student population will include recent high school graduates, veterans, underrepresented groups, and those interested in a career change or retraining. Students will be recruited through normal outreach efforts that the college utilizes. There is also a high school outreach effort that is gaining momentum, which is designed to inform students about the career options within cybersecurity. It is critical to get young people interested in the field as they are the next generation to protect our digital world.

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.