

Docket Item:

Community College Approval: Clackamas Community College, Certificate of Completion Geographic Information Systems (GIS) Technology within 15.1102 – Surveying Technology/Surveying.

Summary:

Clackamas Community College proposes a new Certificate of Completion in Geographic Information Systems (GIS) 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: CC in Geographic Information Systems (GIS) Technology.



Clackamas Community College seeks the Oregon Higher Education Coordinating Commission's approval to offer an instructional program leading to a Certificate of Completion in Geographic Information Systems (GIS) Technology.

Program Summary

GIS offers instruction in GIS software, geography, data analysis, cartography, remote sensing, data collection, database theory, and programming. The program also includes instruction in research skills, geospatial mathematics, computer programming, human relations skills, and field competencies.

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

GIS is not just a certificate program at CCC. GIS classes are required courses for many programs college-wide and there is greater potential to integrate GIS curriculum into programs that are not yet aware of the benefit it can offer to students. The US Bureau of Labor Statistics forecasts geospatial technology as a growth field and any institute of learning would be at a significant competitive disadvantage were it not to offer GIS courses.

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

GIST can no longer be considered to be a specialty, practiced only by GIS professionals. GIS is an additive skill, one that has utility across many disciplines. As the technology has grown and more people become aware of power of location, there is an increasing demand for professionals in fields as varied as public health, transportation, civil engineering, wildland firefighting, emergency management, business, natural resources, and energy to have at least a basic understanding of GIS and, frequently, a functional fluency in the concepts, tools, and methodologies. GIS is not just for GIS professionals anymore.

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

The outreach to potential Advisory Board members include state and local government agencies, construction and engineering firms, and utilities.

The GIS courses reach beyond the GIS certificate and several are included in a multitude of programs.

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

GIS is something that is a skill incorporated into many job titles, it is not often a stand-alone career. Emergency managers, firefighters, surveyors, project managers, construction managers, foresters and

others all use GIS as part of their jobs. The revised version of this certificate at 19 credits will be attractive to people who have a bachelor's or master's degree and need to add these skills. These employees work in areas such as public health, geology, archeology, transportation, civil engineering, wildland firefighting, emergency management, business, business intelligence, natural resources, and energy.

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

The COVID-19 learning environment has better socialized online learning as a viable model for students and one that is particularly conducive to GIS curriculum delivery. A certificate centered on remote learning will offer flexibility for working professionals looking to level-up in their current positions and will increase the access for students beyond the local area. This shift would also offer something area colleges will likely not once students return to in-person learning. CCC GIS will still offer in-person GIS learning opportunities in the form of workshops, lab hours, and specialty classes, but the certificate can be earned remotely to accommodate a wider audience. The revised GIS certificate will leverage out-reach opportunities for its program and explore avenues to "get the word out" not currently in use. This includes the establishment of an advisory committee, social media presence, and high school engagements. This will reach the local community and professionals across disciplines that would benefit from remote learning.

Assurances

Clackamas 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.