

Clackamas Community College

Online Course/Outline Submission System

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Section #1 General Course Information

Department: Manufacturing

Submitter

First Name: Carel

Last Name: Kotze

Phone: 3728

Email: carelk

Course Prefix and Number: GIS - 237

Credits: 1

Contact hours

Lecture (# of hours):

Lec/lab (# of hours): 22

Lab (# of hours):

Total course hours: 22

For each credit, the student will be expected to spend, on average, 3 hours per week in combination of in-class and out-of-class activity.

Course Title: Advanced Programming for GIS

Course Description:

Advanced training in programming for GIS. The course focuses on the Python programming language both inside and outside the ArcGIS Environment. Python is used to program objects to execute specific GIS tasks in the ArcGIS environment.

Type of Course: Career Technical Preparatory

Is this class challengeable?

Yes

Can this course be repeated for credit in a degree?

No

Is general education certification being sought at this time?

No

Does this course map to any general education outcome(s)?

No

Is this course part of an AAS or related certificate of completion?

Yes

Name of degree(s) and/or certificate(s): Geographic Information Systems(GIS) certificate

Are there prerequisites to this course?

Yes

Pre-reqs: GIS-236

Have you consulted with the appropriate chair if the pre-req is in another program?

No

Are there corequisites to this course?

No

Are there any requirements or recommendations for students taken this course?

No

Are there similar courses existing in other programs or disciplines at CCC?

No

Will this class use library resources?

Yes

Have you talked with a librarian regarding that impact?

No

Is there any other potential impact on another department?

No

Does this course belong on the Related Instruction list?

No

GRADING METHOD:

A-F or Pass/No Pass

Audit: Yes

When do you plan to offer this course?

✓ **Winter**

Is this course equivalent to another?

If yes, they must have the same description and outcomes.

No

Will this course appear in the college catalog?

Yes

Will this course appear in the schedule?

Yes

Student Learning Outcomes:

Upon successful completion of this course, students should be able to:

1. utilize Python and how to use it inside the ArcGIS environment,
2. work with different Python editors,
3. utilize the ArcPy site-package,
4. create a script and model to automate a GIS process,
5. use Python to do different geoprocessing operations in ArcGIS.

This course does not include assessable General Education outcomes.

Major Topic Outline:

1. Geoprocessing in ArcGIS.
2. Getting to know ArcPy.
3. Manipulating spatial data in Python.
4. Working with text files in Python.
5. Writing geometries in Python.

Does the content of this class relate to job skills in any of the following areas:

- | | |
|--------------------------------------|------------|
| 1. Increased energy efficiency | No |
| 2. Produce renewable energy | No |
| 3. Prevent environmental degradation | No |
| 4. Clean up natural environment | No |
| 5. Supports green services | Yes |

Percent of course: **50%**

First term to be offered:

Next available term after approval

:

