

Clackamas Community College

Online Course/Outline Submission System

GIS-240 Geospatial Database Development and Management

General education certified: Yes **No**

- Writing
- Oral Communication
- Arts and Letters
- Science & Computer Science
- Mathematics
- Social Science
- Cultural Literacy
- Health & Physical Education

Approved Date (mm/dd/yyyy): / /

Section #1 General Course Information

Department: WAFE

Submitter

First Name: Jeff
Last Name: Ennenga
Phone: 3539
Email: jeff.ennenga

Course Prefix and Number: GIS - 240

Credits: 3

Contact hours

Lecture (# of hours):
Lec/lab (# of hours): 66
Lab (# of hours):
Total course hours: 66

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: Geospatial Database Development and Management

Course Description:

Introduces the fundamentals of relational databases (non-geographic and geographic). Covers SQL query basics to retrieve, edit, insert, and manipulate data. Learn **geo**-relational database design concepts and theory. Work with open

source Postgres/PostGIS and ESRI's geodatabase products. Identify and apply key differences in developing, querying, managing, and administering an enterprise geodatabase.

Type of Course: Career Technical Preparatory

Reason for the new course:

To broaden the understanding and skills for GIS

Is this class challengeable?

No

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): CC: GISTECHNOLOGY

Are there prerequisites to this course?

No

Are there corequisites to this course?

No

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

Yes

Recommendations: Be familiar with GIS software and applications.

Requirements:

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?

✓ **Not every term**

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. Explain fundamentals of database and geodatabase design
2. Access, edit, and manipulate data with SQL query language
3. Design, create, and manage a PostGIS Geodatabase
4. Design, create, and manage ESRI File Geodatabase
5. Design, create, and manage ESRI Enterprise Geodatabase
6. Apply SQL query language to access, edit, and manipulate spatial data from an enterprise geodatabase

This course does not include assessable General Education outcomes.

Major Topic Outline:

1. Relational database fundamentals. Design and management
2. SQL Query basics
 - a. SELECT, UPDATE, INSERT, DELETE queries
 - b. Query process and operation order
 - c. JOINS
 - d. Aggregating data
 - c. Stored Procedures, functions, and views
3. Postgres/PostGIS geodatabase
 - a. Spatial select queries
 - b. Geometry Types
 - c. Working with views
 - e. Geometry constructors, accessors, editors, outputs
 - f. Spatial functions
4. ESRI's Desktop File Geodatabase
 - a. Attribute domains
 - b. Subtypes
 - c. Feature datasets
 - d. Topology
 - e. Geometric networks
5. ESRI's Enterprise Geodatabase
 - a. Adding users and data
 - b. Data set creation
 - c. SDE tables
 - d. Versioning

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 | No |

Percent of course: 0%

First term to be offered:

Next available term after approval

:
