GEOG 151: PROGRAMMING FOR GIS II

In Workflow

1. GEOG Chair (schmidmc@csus.edu)
2. NSM College Committee Chair (mikkel.jensen@csus.edu)
3. NSM Dean (datwyler@csus.edu)
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8. Catalog Editor (catalog@csus.edu)
9. Registrar's Office (k.mcfarland@csus.edu)
10. PeopleSoft (PeopleSoft@csus.edu)

Approval Path

1. Wed, 21 Feb 2024 00:39:16 GMT
   Matt Schmidtlein (schmidmc): Approved for GEOG Chair
2. Wed, 21 Feb 2024 23:32:36 GMT
   Mikkel Jensen (mikkel.jensen): Approved for NSM College Committee Chair
3. Thu, 22 Feb 2024 00:09:07 GMT
   Shannon Datwyler (datwyler): Approved for NSM Dean

History

1. Feb 14, 2024 by Thomas Krabacher (tsk)

New Course Proposal

Date Submitted: Wed, 21 Feb 2024 00:38:14 GMT

Viewing: GEOG 151 : Programming for GIS II

Last approved: Wed, 14 Feb 2024 15:02:29 GMT

Last edit: Wed, 21 Feb 2024 23:32:04 GMT

Changes proposed by: Matt Schmidtlein (211414750)

Contact(s):

Name (First Last)	Email	Phone 999-999-9999
Matt Schmidtlein	schmidmc@csus.edu	916-34-2077

Catalog Title:
Programming for GIS II

Class Schedule Title:
Programming for GIS II

Academic Group: (College)
NSM - Natural Sciences & Mathematics

Academic Organization: (Department)
Geography

Will this course be offered through the College of Continuing Education (CCE)?
No

Catalog Year Effective:
Fall 2024 (2024/2025 Catalog)

Subject Area: (prefix)
GEOG - Geography

Catalog Number: (course number)
151

Course ID: (For administrative use only.)
203283

Units:
3

Is the only purpose of this change to update the term typically offered or the enforcement of existing requisites at registration?
No

In what term(s) will this course typically be offered?
Fall, Spring

Does this course require a room for its final exam?
No, final exam does not require a room (Last Class)

This course complies with the credit hour policy:
Yes

Justification for course proposal:
The purpose of this course is to correct a previously overlooked error in the K-factors applied. Currently, the course is approved for 2 lab units and 1 lecture unit. This proposal is to change this to 1 lab unit and 2 lecture units. This will bring the course into alignment with the way it is scheduled, and with comparable courses in the department.

Course Description: (Not to exceed 80 words and language should conform to catalog copy.)
This is an advanced course in programming and scripting for intermediate to advanced GIS users, using an object-oriented programming approach. You will develop well-documented and structured geoprocessing programs for data management, processing, and automation in the Python programming language, leveraging libraries such as ArcPy and GDAL.

Are one or more field trips required with this course?
No

Fee Course?
No

Is this course designated as Service Learning?
No

Is this course designated as Curricular Community Engaged Learning?
No

Does this course require safety training?
No

Does this course require personal protective equipment (PPE)?
No

Does this course have prerequisites?
Yes

Prerequisite:
GEOG 150 or instructor approval.

Prerequisites Enforced at Registration?
Yes

Does this course have corequisites?
No

Graded:
Letter

Approval required for enrollment?
No Approval Required

Course Component(s) and Classification(s):

Laboratory
Lecture

Laboratory Classification

CS#16 - Science Laboratory (K-factor=2 WTU per unit)

Laboratory Units

1

Lecture Classification

CS#02 - Lecture/Discussion (K-factor=1WTU per unit)

Lecture Units

2

Is this a paired course?

No

Is this course crosslisted?

No

Can this course be repeated for credit?

No

Can the course be taken for credit more than once during the same term?

No

Description of the Expected Learning Outcomes and Assessment Strategies:

List the Expected Learning Outcomes and their accompanying Assessment Strategies (e.g., portfolios, examinations, performances, pre-and post-tests, conferences with students, student papers). Click the plus sign to add a new row.

	Expected Learning Outcome	Assessment Strategies
1	Develop and write clearly structured and documented Python programs	- Quizzes - Laboratory assignments - Independent final project
2	Create platform-agnostic geoprocessing and/or data manipulation automation tools	- Quizzes - Laboratory assignments - Independent final project
3	Create custom toolboxes for ArcGIS using Python and ArcPy	- Laboratory assignments - Independent final project
4	Develop written project proposal/storyboard and follow basic Agile development	- Independent final project

Attach a list of the required/recommended course readings and activities:

Syllabus_GEOG151_Proposal.docx

Is this course required in a degree program (major, minor, graduate degree, certificate?)

No

Does the proposed change or addition cause a significant increase in the use of College or University resources (lab room, computer)?

No

Will there be any departments affected by this proposed course?

No

I/we as the author(s) of this course proposal agree to provide a new or updated accessibility checklist to the Dean's office prior to the semester when this course is taught utilizing the changes proposed here.

I/we agree

University Learning Goals

Undergraduate Learning Goals:

Competence in the disciplines
Intellectual and practical skills
Integrative learning

Is this course required as part of a teaching credential program, a single subject, or multiple subject waiver program (e.g., Liberal Studies, Biology) or other school personnel preparation program (e.g., School of Nursing)?
No

GE Course and GE Goal(s)

Is this a General Education (GE) course or is it being considered for GE?
No

Key: 14132