GEOG 255: GIS DATA ACQUISITION AND MANAGEMENT

In Workflow

1. GEOG Chair (schmidmc@csus.edu)
2. NSM College Committee Chair (mikkel.jensen@csus.edu)
3. NSM Dean (datwyler@csus.edu)
4. Academic Services (catalog@csus.edu)
5. Senate Curriculum Subcommittee Chair (curriculum@csus.edu)
6. Dean of Undergraduate (gardner@csus.edu)
7. Dean of Graduate (cnewsome@skymail.csus.edu)
8. Catalog Editor (catalog@csus.edu)
9. Registrar's Office (k.mcfarland@csus.edu)
10. PeopleSoft (PeopleSoft@csus.edu)

Approval Path

1. Tue, 07 May 2024 22:32:25 GMT
   Matt Schmidtlein (schmidmc): Approved for GEOG Chair
2. Thu, 24 Oct 2024 17:01:47 GMT
   Mikkel Jensen (mikkel.jensen): Approved for NSM College Committee Chair
3. Thu, 24 Oct 2024 17:13:22 GMT
   Chris Taylor (ctaylor): Approved for NSM Dean

New Course Proposal

Date Submitted: Tue, 07 May 2024 02:19:41 GMT

Viewing: GEOG 255 : GIS Data Acquisition and Management

Last edit: Tue, 29 Oct 2024 19:53:12 GMT

Changes proposed by: Anna Patterson (219679266)

Contact(s):

Name (First Last)	Email	Phone 999-999-9999
Anna Patterson	anna.kp@csus.edu	619-278-4272

Catalog Title:

GIS Data Acquisition and Management

Class Schedule Title:

GIS Data Acquisition & Mngmnt

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 2025 (2025/2026 Catalog)

Subject Area: (prefix)

GEOG - Geography

Catalog Number: (course number)

255

Course ID: (For administrative use only.)

TBD

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?
Yes, final exam requires a room

Does this course replace an existing experimental course?
No

This course complies with the credit hour policy:
Yes

Justification for course proposal:
The department is seeking to create a paired graduate version of an existing course (Geog 155) in order to better serve the needs of graduate students in non-Geography programs within NSM and across the university. Offering the class at the graduate level will allow students to continue to enroll while now receiving graduate-level credit towards their degree.

Course Description: (Not to exceed 90 words and language should conform to catalog copy.)
This course focuses on acquisition and management of geospatial datasets and addresses the interpretation of a variety of data formats available in global information systems (GIS). It explores concepts of geospatial data management strategies, primary GIS data creation, secondary data acquisitions, and leveraging leading-edge geospatial data deployments (for graduate students only).

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 109 or GEOG 209

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?
Yes

Please confirm that it complies with the Paired Courses Policy and enter the course with which it is paired:
GEOG 155

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	Clearly communicate and document standard operating procedures in GIS data acquisition and management processes	labs, portfolio, final project
2	Demonstrate development and use of structured naming conventions and file management systems	labs, portfolio, final project
3	Identify the fundamentals of database systems, design techniques, and their use in organizations	labs, quizzes, portfolio
4	Create and alter databases using standard relational database management systems (DBMS) and geodatabase structures	labs, final project
5	Develop entity-relationship diagrams, relational schemas, and data dictionaries given a set of business rules	labs, portfolio
6	Define, design, and implement attribute domains	labs, quizzes, portfolio, final project
7	Write database queries using Structured Query Language (SQL) for a variety of data definition and data manipulation scenarios	labs, quizzes, portfolio, final project
8	Define and identify differences between data and file types	labs, quizzes, portfolio, final project
9	Describe what metadata is, why it's important, and applicable standards for capturing and documenting metadata	labs, portfolio, final project
10	Acquire primary geospatial data using GPS and visualize using geospatial software	labs, portfolio, final project
11	Identify and communicate strategies to, and then acquire, secondary geospatial data (ex: Census, DEMs, imagery, boundaries) and visualize using geospatial software	labs, portfolio, final project

12	Work with teammates to establish group expectations (ex: goals, timelines, individual and collaborative tasks); elicit, listen to, and incorporate ideas from teammates with different perspective and backgrounds; critique others work/ideas constructively & respectfully	labs, peer-review, final project
13	Clearly communicate geospatial techniques, rationale, limitations, and considerations to technical and non-technical audiences in a professional manner	peer-review, portfolio, final project
14	Synthesize and evaluate data to reveal insightful patterns, differences, or similarities related to a geospatial problem, and discuss relevant, supported limitations and implications of the analysis	labs, peer review, portfolio, final project
15	Understand and apply ethical and legal considerations related to GIS, including privacy, data security, and the responsible use of geospatial technologies	labs, portfolio, final project
16	Compare strengths and limitations of designs/solutions; identify methodological problems and how to troubleshoot study design	labs, peer-review, portfolio, final project

Attach a list of the required/recommended course readings and activities:
proposedsyllabus_GEOG255.docx

For whom is this course being developed?
Majors of other Depts

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

Has a corresponding Program Change been submitted to Workflow?
Yes

Identify the program(s) in which this course is required:

Programs:
Minor in Geographic Information Science

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

Graduate (Masters) Learning Goals:
Disciplinary knowledge
Communication
Critical thinking/analysis
Information literacy
Professionalism
Research (optional)

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

Is this a Graduate Writing Intensive (GWI) course?
No

Key: 14598