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University of Hawai'i
Code Request Form for Academic Programs

NEW SUBJECT CODE

Date: 11/25/2015

REQUESTOR CONTACT INFORMATION

Name	Kahlen Lee	Campus	Kauai Community College
Title	Educational Specialist	Email	kathlen@hawaii.edu
Office/Dept	Academic Affairs	Phone	808-245-8204

SUBJECT CODE TO CREATE

Institution	KAU - Kauai CC	Effective Term	Spring 2017
College	Instructional	Department	MS

	Code (Max. Characters)	Description	Check the box if requesting a new code:
Subject	(4) GIS	Geographic Information System	☐ See Banner form STVSUBJ

ATTACHMENTS

☑ Memo with appropriate campus approval (Campus Curriculum Committee)

VERIFICATIONS

Requestor:

James Dire

Print Name	Signature	Date
		11/25/15

Registrar:

Kailana Soto

Print Name	Signature	Date
		12/1/15

For Community Colleges, verification of consultation with OVPCC Academic Affairs:

Suzette Robinson

Print Name	Signature	Date
		12/2/15

UNIVERSITY
of HAWAI'I
SYSTEM

Kathlen Lee <kathlen@hawaii.edu>

CC: Course Outline (GIS 200) Approved

1 message

helencox@hawaii.edu <helencox@hawaii.edu>   Wed, Nov 25, 2015 at 11:02 AM
To: arnette@hawaii.edu, btyamamo@hawaii.edu, cfujii@hawaii.edu, dressler@hawaii.edu, duanemiy@hawaii.edu,
fujiic@hawaii.edu, girardr@hawaii.edu, gtalbo@hawaii.edu, jrcarval@hawaii.edu, kailana@hawaii.edu,
kathlen@hawaii.edu, krutte@hawaii.edu, pmcgrath@hawaii.edu, puali@hawaii.edu, rkincaid@hawaii.edu,
rsrandol@hawaii.edu, tabura@hawaii.edu, tanakawa@hawaii.edu, tnapoleo@hawaii.edu, yimtabuc@hawaii.edu

This is to inform you that outline GIS 200 was recently approved.

Log in to Curriculum Central

NOTE: This is an automated response. Do not reply to this message.

Kauai Community College
GIS 200 - Interpreting and Creating GIS Maps

1. **What is the purpose of this modification/proposal? Click on the ? on the right for help.**

   New course proposal.

2. **If this is a new course or a course modification (including alpha/number changes, inactivating courses, or reactivating courses), provide a brief rationale for this course proposal. Click on the ? on the right for help.

If you are modifying the alpha or number of the course, include the EXISTING (previously approved) alpha and number for this course.**

   This course is designed for the proposed Certificate Program in Geographic Information Systems (GIS).

3. **Course alpha. Click on the ? on the right for help.**

   GIS

4. **Course number. Click on the ? on the right for help.**

   200

5. **Catalog title. Click on the ? on the right for help.**

   Interpreting and Creating GIS Maps

6. **Catalog description.**

   This course introduces advanced geospatial analysis techniques, including Global Positioning Systems (GPS), GIS database and overlay creation, data classification, location analysis, distribution and density, geovisualization techniques, and map interpretation through the use and application of GIS. This course will combine an overview of general principles of GIS and practical experience in the analytical use of spatial information. Students will gain greater in-depth knowledge of geospatial analysis and examine the social context of mapping and knowledge production, examine the diverse range of GIS applications, and complete a final project with a practical component involving the use of a geospatial analysis software package. Special emphasis and concentration will focus on sustainability, considering the current and future use and protection of resources in light of land management.

7. **Maximum enrollment per class section.**

   16

8. **Credits.**

   3

9. **How many hours of instruction (lecture, lab, etc.) per week are required for the semester?**

   - Lecture (Ratio - 1 contact hour : 1 credit) (3)

10. **Is this course repeatable for credit? If yes, how often can this course count towards a degree or certificate?**

    NO

    This course is repeatable for a maximum of:

11. **Is this course cross-listed with any other course on campus?**

    NO

12. Pre-requisites. Click on the ? on the right for approved pre-requisite wording.

"C" or higher in GIS 189.

13. Recommended preparation (Information included for college catalog only).

None.

14. Co-requisites.

None.

15. What is the effective term for the changes proposed for this course?

Spring 2017

16. List all course student learning outcomes (CSLOs) that apply to this course.

Course SLO
Use advanced geospatial information technologies and techniques including Geographic Information Systems, Global Positioning Systems, and Spatial Analysis to create maps for an area of interest to the student, such as sustainability, site suitability analysis and resource management.
Apply concepts, techniques, and software tools that are part of Geographic Information Systems, with emphasis on GPS use, geovisualization, data and database development, geospatial analysis, and case-study applications.
Analyze and describe geographic information representation and use of GIS mapping software, identifying how to address complex problems with GIS technologies and to create solutions. Special emphasis and concentration will focus on sustainability, considering the current and future use and protection of resources in light of land management.
Differentiate advantages and disadvantages of various geospatial information technologies, both advanced and basic.

17. Select methods of assessment from the list provided and show how they align with the CSLOs.

- Case or longitudinal studies (0)
- Demonstration (0)
- Graphic tests and displays (0)
- Locally developed tests (0)
- Overall analysis (0)
- Poster presentations (0)
- Skills Test (0)
- Written products (0)

Method of Evaluation/Course SLO	Use advanced geospatial information technologies and techniques including Geographic Information Systems, Global Positioning Systems, and Spatial Analysis to	Apply concepts, techniques, and software tools that are part of Geographic Information Systems, with emphasis on GPS use, geovisualization, data and database development, geospatial analysis, and	Analyze and describe geographic information representation and use of GIS mapping software, identifying how to address complex problems with GIS technologies	Differentiate advantages and disadvantages of various geospatial information technologies, both advanced and basic.

	create maps for an area of interest to the student, such as sustainability, site suitability analysis and resource management.	case-study applications.	and to create solutions. Special emphasis and concentration will focus on sustainability, considering the current and future use and protection of resources in light of land management.	
Case or longitudinal studies	☑	☑		
Demonstration	☑		☑	
Graphic tests and displays		☑		
Locally developed tests				☑
Overall analysis		☑		
Poster presentations	☑	☑		
Skills Test	☑			
Written products			☑	☑

18. Include program student learning outcomes (PSLOs) and show how they align with the CSLOs.

Program SLO/Course SLO	Use advanced geospatial information technologies and techniques including Geographic Information Systems, Global Positioning Systems, and Spatial Analysis to create maps for an area of interest to the student, such as sustainability, site suitability analysis and resource management.	Apply concepts, techniques, and software tools that are part of Geographic Information Systems, with emphasis on GPS use, geovisualization, data and database development, geospatial analysis, and case-study applications.	Analyze and describe geographic information representation and use of · GIS mapping software, identifying how to address complex problems with GIS technologies and to create solutions. Special emphasis and concentration will focus on sustainability, considering the current and future use and protection of resources in light of land	Differentiate advantages and disadvantages of various geospatial information technologies, both advanced and basic.

						management.	
G.I.S. Certificate PSLOs (updated 10/17/2013): Analyze and describe contemporary and interdisciplinary geographical representation, with a focus on social and environmental management issues.				☑		☑	☑
Apply acquired knowledge and skills, incorporating geographic perspectives into their major fields of specialization.		☑		☑		☑	
Critically analyze the specific advancements of geographical representation, and support geographic decisions and the furthering of geographic scientific and technological knowledge, especially related to the presentation of geographic mapping across cultures and through time, and assessing theories and assumptions about mapping and decision-making that relate to the student's particular academic focus.						☑	☑
Illustrate critical thinking skills in decision-making that reflect ethical and professional understandings of geographical mapping.				☑		☑	
Describe and analyze the politics and influences of geographical representation.						☑	☑
Construct maps utilizing digital techniques, computer assisted design (CAD), database development, and map design.		☑				☑	
Communicate successfully orally and in writing in Standard American English, and interpret, and/or express themselves in, some other form of communication at a basic level, whether from knowledge of a second language or through artistic or symbolic expression.						☑	
Analyze and demonstrate quantitative methods appropriately, based upon a scientific understanding of the physical and natural world, and an understanding of the mathematics of digitized geographical representation.		☑		☑			

19. Select all institutional student learning outcomes (ISLOs) that apply to this course and show how they align with the CSLOs.

	(Respect for Diversity) - Demonstrate cognitive, affective, and behavioral skills and characteristics that are respectful of others' opinions, feelings, values, and individual expression.
	(Written Communication) - Write in clear and organized Standard American English to present, explain, and evaluate ideas, to express feelings, and to support conclusions, claims, or theses.
	(Oral Communication) - Speak in understandable and organized Standard American English to explain ideas, to express feelings, and to support conclusions, claims, or theses. Receive, construct meaning from, and respond to spoken and/or nonverbal messages.
	(Reading) - Read, evaluate, and interpret written material critically and effectively.

☑	**(Symbolic Reasoning)** - Use appropriate mathematical and logical concepts and methods to understand, analyze, and explain issues. ☑ Preparatory Level
☑	**(Integrative Thinking)** - Use problem-solving skills and creative thinking strategies to make connections among ideas and experiences and to synthesize and transfer learning to new and varied situations. ☑ Preparatory Level
☑	**(Information Literacy)** - Locate, retrieve, evaluate, and interpret the value of information gained from reading text materials, making observations, and using electronic media, and reflectively use that information. ☑ Preparatory Level
☑	**(Technological Competency)** - Identify, allocate, and utilize technological resources effectively. ☑ Preparatory Level
	(Teamwork) - Participate proactively and interact cooperatively and collaboratively in a variety of settings.
	(Ethics) - Demonstrate an understanding of ethical issues in public and personal contexts that can be used to make sound judgments and decisions.

GenED SLO/Course SLO	Use advanced geospatial information technologies and techniques including Geographic Information Systems, Global Positioning Systems, and Spatial Analysis to create maps for an area of interest to the student, such as sustainability, site suitability analysis and resource management.	Apply concepts, techniques, and software tools that are part of Geographic Information Systems, with emphasis on GPS use, geovisualization, data and database development, geospatial analysis, and case-study applications.	Analyze and describe geographic information representation and use of GIS mapping software, identifying how to address complex problems with GIS technologies and to create solutions. Special emphasis and concentration will focus on sustainability, considering the current and future use and protection of resources in light of land management.	Differentiate advantages and disadvantages of various geospatial information technologies, both advanced and basic.
(Symbolic Reasoning) - Use appropriate	☑		☑	

mathematical and logical concepts and methods to understand, analyze, and explain issues.	ıı				
(Integrative Thinking) - Use problem-solving skills and creative thinking strategies to make connections among ideas and experiences and to synthesize and transfer learning to new and varied situations.	☑				
(Information Literacy) - Locate, retrieve, evaluate, and interpret the value of information gained from reading text materials, making observations, and using electronic media, and reflectively use that information.				☑	☑
(Technological Competency) - Identify, allocate, and utilize technological resources effectively.		☑			

20. List the topics and activities that will be presented during the course and include the approximate time spent on each topic.

Week 1: Introduction to Class - Review of Technologies (GIS & GPS)
Week 2: GPS and Data Transfer
Week 3: Raster and Vector Basemap Transformations
Week 4: Geomodeling
Week 5: GIS Database Development
Week 6: Data and Database Setup for Spatial Analysis
Week 7: Spatial Analysis
Week 8: MIDTERMS
Week 9: Network Analaysis
Week 10: Mapping Change Over Time
Week 11: Measuring Geographic Distribution
Week 12: Graphic Pattern and Cluster Analysis
Week 13: Creating a GIS Portfolio
Week 14:Participatory Community-Based Mapping Techniques
Week 15: Mapping Outputs and Products
Week 16: Evaluation, Application, and Implementation
FINALS

21. List possible textbooks and/or materials appropriate for this course. If there are none, explain why.

In addition, PDF files of relative academic and professional articles provided through the studentsâ?? laulima site for GIS 200.

Hardware: GPS devices (Geography Faculty currently maintains ~15 GPS units ordered Feb. 2014 under the NSF-TCUP grant Kaua'i Community College).

Software: ESRI ARCGIS 10.3.1 (Software licencing for 180-days is provided in the ESRI ArGIS Tutorial 2 - required text), additionally, under the NSF-TCUP grant, Geography Faculty will maintain a classroom with ~10 computers with licenses for this software.

- David W. Allen. ESRI 10.1 GIS Tutorial 2 Spatial Analysis Workbook. Third. ESRI, 2013, ISBN-10: 1589483375.

- Andy Mitchell. The Esri Guide to GIS Analysis, Volume 3: Modeling Suitability, Movement, and Interaction. ESRI, 2012, ISBN-10: 1589483057.

22. What course delivery methods will be used?

- Classroom/Lab/Studio (0)

23. What teaching methods are required for this course?　　　　　　　　　　ℓ

- Collaborative learning (also referred to as cooperative learning, team learning, or group-based learning) (0)
- Demonstrations (0)
- Field trips (0)
- Hands-on learning (0)
- Lab (0)
- Lectures and group discussions (0)
- Problem-based learning (focused on students working cooperatively in groups to seek solutions to real world problems) (0)
- Research (0)
- Student participation (0)
- Student reports and presentations (0)
- WWW research (0)
- Other - explain (0)

Other: GPS field training

24. Suggested grading and evaluation.

- Grading Scale:
  A = 90 - 100%
  B = 80 - 89%
  C = 70 - 79%
  D = 60 - 69%
  F = 59% and below (0)

A student's overall course grade will be calculated by means of the following weighted criteria:
35% - Assignments
35% - Final Project
15% - Examinations
15% - Participation

25. Include similar courses taught at other UH campuses and, if applicable, explain how course content is different.

List similar courses taught...	Course alpha and number	Explain how course content is different
...at another KCC campus unit(s)	N/A	
...at Hawaii CC	GEOG 180	The course focuses on an broad approach to GIS and GPS with emphasis on societal and cultural aspects; GEOG 180 focuses solely on forestry management.
...at Honolulu CC		
...at Kapiolani CC		
...at Leeward CC		
...at Windward		

CC		
...at UH Hilo	GEOG 104 GEOG 480	The course focuses on an entire overview of GIS, GPS and associated societal and cultural aspects. GEOG 104 is less of a complete introduction of GIS. The course proposed is a beginning yet complete 200-level introduction to GIS as a first step toward 3 later courses expanding only on aspects found in GEOG 480 (UHH).
...at UH Manoa	GEOG 388	The course proposed is a beginning yet complete 200-level overview of GIS and GPS as a first step toward later courses expanding only on aspects found in GEOG 388 (UHM).
...at UH Maui College		
...at UH West Oahu		

26. Is this course already articulated, appropriate for articulation, or not appropriate for articulation? If this course is already articulated provide evidence (see question mark icon). If this course is appropriate for articulation OR not appropriate for articulation, explain.

This course is appropriate for articulation.

Explanation for Appropriate for articulation or Not appropriate for articulation statuses -- or website link **only** for already articulated courses (if there is no link below, the information is attached):

This course is appropriate for articulation because of the numerous GIS classes offered across the state, including a joint Maui/Kauai certificate of competence offered in GIS and Conservation Management.

27. Date proposed (CANNOT BE MODIFIED).

08/28/2015

28. List the academic year (e.g., 2015/16) of all five-year review cycles this course has gone through. If a review cycle is already listed, do not remove it. Instead, add the current review cycle to the bottom of the list.

2015/16

29. The Google Doc format of the syllabus for this course can be found using the link provided.

https://docs.google.com/document/d/1OAiVCmwEY6mbwwxDHIFs1LJVSHIzoDlvtR7-zkW6v8s/edit?usp=sharing

30. If applicable, a copy of the programs and/or courses that are impacted by this course (e.g., in a program's/course's pre-requisite, description, etc.) is attached as a PDF. If this is a NEW COURSE or an inactive course being REACTIVATED, the course impact tracker DOES NOT need to be attached. DO NOT USE THE TEXT BOX TO INPUT COURSE IMPACT TRACKER INFORMATION. PLEASE ATTACH THE INFORMATION AS A PDF.

UNIVERSITY of HAWAI'I
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Princess Soares <pfrederi@hawaii.edu>

Re: GIS alpha code request

Kathlen Lee <kathlen@hawaii.edu>   Mon, Dec 7, 2015 at 9:24 AM
To: Roxanne Yee <rsyee@hawaii.edu>
Cc: Princess Soares <pfrederi@hawaii.edu>, Suzette Robinson <suzetter@hawaii.edu>, Gayle Ishii
<gaylei@hawaii.edu>

Hi everyone,

Please note that the effective term should be Fall 2016. The course outline attached with the request will be
updated (question #15) as well. The effective term was listed as Spring 2017 to follow Curriculum Committee
deadlines, but due to discrepancies with deadlines from various approving bodies, the Curriculum Committee
voted to approve honoring the Fall 2016 effective term. Please let me know if I need to resubmit anything.

Thanks!
Kathlen
[Quoted text hidden]