Cover Sheet: Request 10253

Geographic Information Technologies (GIT)

Info

Process	Certificate|New|Ugrad/Pro
Status	Pending
Submitter	Southworth,Jane jsouthwo@ufl.edu
Created	5/8/2015 11:01:14 AM
Updated	9/23/2015 3:30:53 PM
Description	Geographical information technologies have been increasingly used in both research and practice. This certificate offers a curriculum that covers a variety of geospatial technologies, such as digital mapping, geographic information system (GIS), and remotely sensed image processing. Hands-on experiences of these technologies are emphasized through lab-based applications.

Actions

Step	Status	Group	User	Comment	Updated
Department	Approved	CLAS - Geography 011609000	Southworth, Jane		5/8/2015
Added GIT_catalog.docx					5/8/2015
College	Approved	CLAS - College of Liberal Arts and Sciences	Pharies, David A		9/23/2015
Replaced new_certificate_form_GIT.docx Added GITnew_certificate_form_.docx					9/23/2015 9/23/2015
Office of Institutional Planning and Research	Approved	PV - Office of Institutional Planning and Research	Zeglen, Marie	The assignment of CIP 45.0701 is approved for this certificate.	9/23/2015
No document changes					
University Curriculum Committee	Pending	PV - University Curriculum Committee (UCC)			9/23/2015
No document changes					
Office of the Registrar					
No document changes					
OIPR Notified					
No document changes					
Student Academic Support System					
No document changes					
Catalog					
No document changes					
Academic Assessment Committee Notified					
No document changes					

Step	Status	Group	User	Comment	Updated
College Notified					

No document changes

This form may be used to propose a new certificate. Instructions for completing and submitting this form are on the last page.

Proposed Certificate

1. Certificate Name   Geographic Information Technologies

2. Transcript Title (maximum 50 characters)   Geographic Information Technologies

3. Amount of Credit   11

4. Level   ☒ Baccalaureate   ☐ Graduate   ☐ Professional

5. CIP Code 45.0701   6. Degree Name   Geography

7. Effective Term   Earliest Available   Effective Year   Earliest Available

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8. **Certificate Description (50 words or less)**

Geographical information technologies have been increasingly used in both research and practice. This certificate offers a curriculum that covers a variety of geospatial technologies, such as digital mapping, geographic information system (GIS), and remotely sensed image processing. Hands-on experiences of these technologies are emphasized through lab-based applications.

9. **Requirements for Admission**

The certificate program is open to all currently enrolled UF undergraduate students.

10. **Requirements for Completion**

Students need to take two required courses and one elective course for a minimum of 11 credits. Students must earn a minimum grade of B- for each course.

Required courses
    GIS3043 Foundations of Geographic Information Sciences (4 credits, Letter graded, Spring and Fall)
    GIS4037 Digital Image Processing (4 Credits, Letter graded, Fall)

Elective courses (select one)
    GIS4021C Air Photo Interpretation (3 Credits, Letter graded, Spring)
    GIS4001C Maps and Graphs (4 Credits, Letter graded, Spring)
    GIS4113 Introduction to Spatial Networks (3 Credits, Letter graded, Fall)
    GIS4115 Applied Geostats (3 Credits, Letter graded, Spring)

11. **Rationale and Place in Curriculum**

Nowadays, Geographic Information Technologies have been used in a wide range of research fields and practices. Its job market is expected to grow 22% through 2020. Many geography programs offer certificate programs to train their students with these technologies. However, UF and our department does not have an undergraduate certificate program concentrated on Geographic Information Technologies to satisfy such increasing needs.

Students currently taking the courses proposed for this certificate may be majoring in geography, geology, wildlife ecology and conservation, public health, or other majors on campus. These students do not currently have a way to demonstrate their knowledge and skills of geographic information technologies. This certificate is offered to students in the Geography major as a complement to their bachelor degree, to obtain additional knowledge and experiences of geospatial technologies. The certificate may also be used by non-degree seeking students to pursue personal and academic interests in geographically related topics, and to enhance opportunities for employment and admission to graduate schools. A Certificate in Geographic Information

Technologies will be highly desired by industry and government agencies to make clear a student's proficiencies in these techniques.

12. **Student Learning Outcomes**

Content: Students should understand basic concepts and techniques related to geographical information.
Assessment: Questions will be embedded within exams and quizzes of the two required courses that assess this content. These questions will be graded by a rubric.

Critical thinking: Students will be able to apply geographic information technologies to analyze and solve real-world spatial problems.
Assessment: Students will complete weekly homework assignments and complete an independent final project involving spatial data analysis and spatial reasoning in each of the required courses. The assignments and project reports will be graded by a rubric. The elective courses also all have weekly assignments and labs which will test the geographic reasoning and technology skills of the students.

Communication: Student will interpret and effectively communicate information spatially and graphically.
Assessment: Students are required to give oral presentations of their final projects that include visual representation of geographic information and the interpretation of the results, for each of the required courses and these are graded by a rubric, as well as assessed by all other students in the course.

- Prepare supporting documentation including memos, emails, etc. from other units to provide evidence of the availability of courses that are required for the certificate and/or to provide evidence for support of the proposed certificate if there is clear or potential overlap or duplication of content.
- Prepare a document showing the catalog-style description of the certificate, requirements for entry, requirements for completion, and a suggested semester-by-semester plan using a Word document.

Instructions

This form may be used to propose a new undergraduate, professional or graduate certificate.

1. Enter the name of the certificate. Example: Urban Pest Management.
2. Enter the transcript title of the certificate. This is limited to 50 characters, including spaces.
3. Enter the total number of credit hours needed to complete the certificate program.
4. Enter the program level of the certificate.
5. Enter the six digit Classification of Instructional Programs (CIP) code for the degree program associated with the proposed certificate. The code has the numerical format XX.XXXX. Contact the Office of Institutional Planning and Research (OIPR) to verify the CIP code for the existing degree program.
6. Enter the degree name associated with the CIP code entered above.
7. Enter the term (semester and year) that the certificate would start.
8. Enter a description of the certificate. This is limited to 50 words or less.
9. List any requirements for admission to this new certificate program such grade point average, background in the discipline, current enrollment status, etc.. Please indicate if the certificate only accepts students of a particular status: for example, current UF graduate students, graduate students in a specific college, non-degree seeking students, or any student status.
10. List all of requirements for completion of the certificate program, such as courses, internships, projects, etc. For each course, indicate prefix, number, title, # credits, and established grading scheme (letter graded, and/or S/U). The title should be identical to the official title of the course as listed in the Graduate Catalog at http://gradcatalog.ufl.edu.
11. Describe the rationale for offering this new certificate and having it on the transcript, its place in the curriculum, how it will enhance the quality of the existing program or department. Also describe its overlap with any existing certificates and programs, and a justification for any such overlap. Note that documentation of consultation will be expected for any certificate with overlapping content.
12. List each student learning outcome with its associated courses, assessment type (e.g. course-related exam/assignment/grade, final paper/project/presentation, standardized exam, capstone) and method (e.g. rubric, faculty committee, single faculty member).

Reminder: Prepare and upload documentation showing consultation with any academic units which may be affected by the proposed certificate. This documentation may include email correspondence, memos, or other letters of support from consulted academic units.

Reminder: Prepare a copy of the proposed catalog changes that shows all revisions, for example using strikeouts and underlined text, or using tracked changes.

Geographic Information Technologies Certificate

Credits: a minimum of 11 credits with minimum grades of B- for each course.

Geographical information technologies has been increasingly used in both research and practice. Job opportunities are expected to grow 22% from 2010 to 2020. This certificate offers a curriculum that covers a variety of geospatial technologies, such as digital mapping, geographic information system (GIS), and remotely sensed image processing. Hands-on experiences of these technologies are emphasized through lab-based applications.

This certificate is open to all currently enrolled UF undergraduate students.

Required Courses

GIS3043 Foundations of Geographic Information Sciences (4 credits)
GIS4037 Digital Image Processing (4 Credits)

Elective courses (select one)

GIS4021C Air Photo Interpretation (3 Credits)
GIS4001C Maps and Graphs (4 Credits)
GIS4113 Introduction to Spatial Networks (3 Credits)
GIS4115 Applied Geostats (3 Credits)

Recommended semester plan

Semester	Courses	Credits
Year 1 Spring	GIS3043 Foundations of Geographic Information Sciences	4
Year 1 Fall	GIS4037 Digital Image Processing	4
Year 2 Spring or Fall	Select one elective course	3-4

Students should contact Dr. Joann Mossa at (352) 294-7510 or **mossa@ufl.edu**.