

Cover Sheet: Request 10921

Certificate in Geology

Info

Process	Certificate New Ugrad/Pro
Status	Pending
Submitter	Meert,Joseph G jmeert@ufl.edu
Created	4/8/2016 10:05:38 PM
Updated	4/27/2016 2:39:10 PM
Description	The certificate in geological sciences is offered via distance learning to UF students. The certificate offers coursework in geological sciences relevant to environmental policy and law, resource economics, teaching, regional planning, building construction, and related fields. The certificate program includes courses required to take the professional geologist licensure exam (PG).

Actions

Step	Status	Group	User	Comment	Updated
Department	Approved	CLAS - Geological Sciences 011610000	Foster, David A		4/12/2016
Deleted academiccertificate.docx					4/8/2016
College	Recycled	CLAS - College of Liberal Arts and Sciences	Pharies, David A	This proposal has been conditionally approved by the CCC. Their comments: - In SLO3, change 'applying' to 'apply' (twice). - The section entitled Assessment Cycle states that "Evaluation of SLO's will consist of review by a team of faculty (one Full, one Associate, one Assistant Professor along with the Chair)." The committee thinks that this may cause a problem if, say, the department no longer has assistant professors to serve on the team. Suggestion: Change into: "Evaluation of SLO's will consist of review by a team of three faculty members."	4/20/2016
No document changes					
Department	Approved	CLAS - Geological Sciences 011610000	Foster, David A		4/20/2016
Deleted academiccertificate.docx					4/20/2016
Added academiccertificate.docx					4/20/2016

Step	Status	Group	User	Comment	Updated
College	Approved	CLAS - College of Liberal Arts and Sciences	Pharies, David A		4/20/2016
No document changes					
Office of Institutional Planning and Research	Approved	PV - Office of Institutional Planning and Research	Zeglen, Marie	CIP 40.0601 is approved.	4/27/2016
No document changes					
University Curriculum Committee	Pending	PV - University Curriculum Committee (UCC)			4/27/2016
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					
College Notified					
No document changes					

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Request: Certificate in Geology

Request description: The certificate in geological sciences is offered via distance learning to UF students. The certificate offers coursework in geological sciences relevant to environmental policy and law, resource economics, teaching, regional planning, building construction, and related fields. The certificate program includes courses required to take the professional geologist licensure exam (PG).

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Created: 4/8/2016 10:05:38 PM

Form version: 1

Responses

Certificate Name Geological Sciences

Transcript Title Certificate in Geological Sciences

Credits 16

Level Baccalaureate

CIP Code 40.0601

Degree Name Geology

Effective Term Fall

Effective Year 2016

Certificate Description The certificate in geological sciences is offered via distance learning to UF students. The certificate offers coursework in geological sciences relevant to environmental policy and law, resource economics, teaching, regional planning, building construction, and related fields. The certificate program includes courses required to take the professional geologist licensure exam (PG).

Requirements for Admission Students must have completed all course prerequisites before enrolling in any course. Degree-seeking geological science majors are not eligible for this certificate.

Requirements for Completion Required grades C or better for all coursework

Required Courses (10 hours)

? GLY 2030C Environmental and Engineering Geology 3 credits or GLY2010 Physical Geology, 3 credits

? GLY3202 Earth Materials, 3 credits

? GLY3105 Evolution of Earth and Life, 4 credits

?

Elective Choose Two (6 credits minimum):

? GLY3882, Hydrogeology and Human Affairs, 3 credits

? GLY3163 Geology of National Parks, 3 credits

? GLY4155 Geology of Florida, 3 credits

? GLY4552C Sedimentary Geology, 4 credits

? GLY4700 Geomorphology, 3 credits

? GLY4822 Groundwater Geology, 3 credits

Rationale and Place in Curriculum Courses in geology provide the background for careers in geology, STEM teaching, public policy, and environmental risk assessment, among others. Professional geologist exams require coursework in geology and proficiency in basic geological concepts and their applications. The certificate in Geology includes coursework applicable to individuals preparing for professional geologist examinations, subject competency for STEM teaching, and basic earth science information needed for public policy, regional planning, and general assessment of risk associated with natural events.

Students will take courses offered online by UF faculty leading to a formal certificate. The certificate comprises only geology courses.

The Certificate program is intended for teaching, policy and similar professional training. Students intending to take the Professional Geologist exam will have the option to take additional courses beyond the number required for the certificate to achieve the minimum of 30 credit hours required to sit for the exam.

UF currently has the only online geology undergraduate degree program in the US and is building a reputation for online education. Many students and professionals require coursework in geology to advance careers. Other certificate programs in the US are either resident programs or specialized programs in Geospatial Technology (or similar), so the UF program will have unique competitive advantages.

Student Learning Outcomes See attached forms

**Certificate in Geology
Academic Assessment Plan
2016-17**

**Geological Sciences
Certificate in Geology**

Liberal Arts & Sciences

**Joseph Meert
(jmeert@ufl.edu)**

Table of Contents

Mission Statement	3
Student Learning Outcomes.....	3
Curriculum Map.....	4
Assessment Cycle	4
Assessment Cycle Chart	5
Methods and Procedures	6
SLO Assessment Matrix.....	6
Figure 1: Rubric for project assessment	7
Assessment Oversight	7

Certificate in Geological Sciences: CLAS Undergraduate Academic Assessment Plan

Mission Statement

The Department of Geological Sciences is part of the College of Liberal Arts and Sciences. Our principal mission is to train students broadly in Earth Sciences and lead them to an understanding into the history of our planet, its resources (and their sustainability), the marine and terrestrial environments and global climate change (both past and present). Our students will be prepared to enter the workforce or continue on to graduate programs across the country and throughout the world. Our mission aligns with the UF and CLAS missions to discover, teach and engage our students.

Student Learning Outcomes (Proposed) (SLOs, CK=Content Knowledge, CT=Critical Thinking; C=Communication)

Content

1. Identify, describe and define the basic concepts related to earth materials and processes.
2. Organize geologic, temporal and spatial data.

Critical Thinking

3. Apply geological principles according to the scientific method.

Communication

4. Produce a clearly and effectively written synthesis of data collected in the field or disseminated in the classroom.

New SLOs, 2016-17
Content
Identify, describe and define the basic concepts related to earth materials and processes.
Organize geologic, temporal and spatial data.
Critical Thinking
Apply geological principles according to the scientific method
Communication
Produce a clearly and effectively written synthesis of data collected in the field or disseminated in the classroom.

Curriculum Map

Curriculum Map for: Geological Sciences

Program: Certificate in Geology

College: Liberal Arts & Sciences

Key: Introuduced

Reinforced

Assessed

Courses SLOs	GLY2030C	GLY3105C	GLY3202C	Elective Courses
Content Knowledge				
#1	I	R	R	R,A
#2	I	R	R	R,A
Critical Thinking				
#3	I	R	A	R,A
Communication				
#4	I	R	A	R,A

Assessment Cycle

The assessment cycle is shown in tabular form (see below). Evaluation of SLO's will consist of review by a team of three faculty members along with the Department Chair. Faculty will be asked to provide materials (described in methods and procedures) for the evaluation process. Materials will be made available to the team in August-September of the assessment year and the team will formulate a list of improvement actions by December and disseminate those materials in January of the following year.

Assessment Cycle Chart

Assessment Cycle for: Geological Sciences

Program: Certificate in Geology

College: Liberal Arts and Sciences

Analysis and Interpretation:

August-September

Improvement Actions:

December

Dissemination:

January

SLOs	Year	16-17	17-18	18-19	19-20	20-21	21-22
Content Knowledge							
#1		x			x		x
#2		x	x			x	
Critical Thinking							
#3		x			x		x
Communication							
#4		x			x		x

Methods and Procedures

SLO Assessment Matrix

2013-14 Student Learning Outcome	Assessment Method	Measurement Procedure
Identify, describe and define the basic concepts related to earth materials and processes.	Labs, Projects/exams	Project rubric
Organize geologic, temporal and spatial data.	Labs, Projects/exams	Project rubric
Apply geological principles according to the scientific method	Labs, Projects/exams	Project rubric
Produce a clearly and effectively written synthesis of data collected in the field or disseminated in the classroom.	Labs, Projects/exams	Project rubric

Direct Assessments

- (1) Projects, Exams and Self-Evaluations conducted in all coursework. Students work individually to produce reports/projects specific to each course. All areas of the Student Learning Outcomes are evaluated by instructional staff (professors and teaching assistants).
- (2) Lab Component: Performance in lab courses is based on both theory (generally lecture based) and practice (lab based). Both are evaluated for effectiveness in reinforcing our Student Learning outcomes by comparing instructional goals with student performance.

Indirect Assessments

- (1) Review of Course Syllabi to check for appropriate inclusion of student learning outcomes.
- (2) Review of End Course examinations (grade distribution) to check for appropriate levels of success in meeting the student learning outcomes.
- (3) Meet with Departmental Advisory Committee (composed of individuals in industry, government and academia) for a discussion on how our graduates are performing on the job.
- (4) Document (through exit interviews) the number of certificated students continuing on in higher learning, industry, government and other occupations.

Figure 1: Rubric for project assessment

Content	Satisfactory	Unsatisfactory
Knowledge	Meets or excels in responding appropriately to the assignment. Produces accurate and detailed reports and professional quality projects.	Fails to respond appropriately to the assignment. Projects contain gross inaccuracies and are not of professional quality
Critical thinking	Synthesizes major ideas and makes connections between smaller projects/areas to observations at a regional scale.	May not consistently show a logical progression of ideas. Does not make key connections between local geology and regional geology.
Communication	Able to communicate basic ideas clearly and concisely. Presentations are well-prepared and delivered on time and are easy to follow.	Unable to communicate basic ideas of the project clearly or concisely. Presentations late or difficult to follow.

Assessment Oversight

Name	Department Affiliation	Email Address	Phone Number
Joseph Meert	Geological Sciences	jmeert@ufl.edu	352-846-2414
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