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 Email electronic copy (with scanned signatures) to jbharvie@alaska.edu

REQUEST FOR A NEW MINOR

SUBMITTED BY:

Department	Geology and Geophy	College/School	CNSM
Prepared by	Anupma Prakash	Phone	474-1897
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See <http://www.uaf.edu/uafgov/faculty-senate/curriculum/course-degree-procedures/> for a complete description of the rules governing curriculum & course changes.

PROGRAM IDENTIFICATION:

TITLE OF MINOR:	Geospatial Sciences	
<p><i>*Number of credits required for completion (minimum is 15):</i></p> <p>"Unless otherwise specified by the appropriate academic unit, a course may be used more than once toward fulfilling degree, certificate, major and minor requirements. Credit hours for these courses count only once toward total credits required for the degree or certificate. Certifying that [the student has] met all major and minor requirements is the responsibility of [the student's] department faculty, who notify the Registrar's Office." From the General University Requirements section of "How to Earn a Bachelor's Degree" in the UAF Catalog.</p>		
Do all the required courses currently exist?		No
If not, list the corresponding New Course paperwork associated with this request:		

Geos/Geog 2XX: Fundamentals of Geospatial Sciences

A. DESCRIPTION OF THE PROPOSED MINOR. Include reasons justifying its creation; objectives of the minor and relationship of the required courses to those objectives.

The new minor is entitled 'Geospatial Sciences'

Objectives of the minor and relationship to the courses: This minor will prepare the undergraduate students to first understand that the Earth is a dynamic system and that exploring the evolution of the Earth helps to provide context to the present and future of the planet Earth. The minor then focuses on providing students with an introduction to geospatial sciences (remote sensing, geographic information systems (GIS) and global positioning systems (GPS), followed by honing student's skill sets in using emerging technologies in geospatial sciences.

The sequence of courses prescribed for the minor helps the students to systematically meet the above mentioned objectives.

Justification : Earth is our habitat and it is important to understand that it works as a dynamic system that changes with time. Geospatial science uses information technology to understand people, places, and processes on the Earth. Knowledge of fundamental principles behind geospatial sciences, and skill-to use technology and apply it for decision-making, will empower our students to be success in personal and professional life.

RECEIVED

SEP 23 2011

Dean's Office
 College of Natural Science & Mathematics

Governance
 10/7/11 KA

B. PROPOSED MINOR REQUIREMENTS AS THEY WILL APPEAR IN THE CATALOG:

See samples provided on page 3 of this form.

Geospatial Sciences

- 1. Complete the following:
 - GEOS F101X--The Dynamic Earth.....4 credits
 - GEOS F112X—The History of Earth and Life.....4 credits
 - GEOS/GEOG F222--Fundamentals of Geospatial Sciences.....3 credits
 - GEOS F225--Field and Computer Methods in Geology.....2 credits
 - GEOS F458--Geoscience Applications of GPS and GIS.....3 credits
 - GEOS F422--Geoscience Applications of Remote Sensing.....3 credits

- 2. Minimum credits required.....19 credits

C. ESTIMATED IMPACT

WHAT IMPACT, IF ANY, WILL THIS HAVE ON BUDGET, FACILITIES/SPACE, FACULTY, ETC.

The positive impact of offering this minor are that it will provide an opportunity to a broad base of undergraduate students to learn about and use geospatial technology for understanding the Earth system and Earth processes. It will prepare the students to use technology for spatial orientation, mapping, planning and decision making. This knowledge and skill-set is high in demand in industry and this minor will prepare students to join the growing geospatial workforce.

This minor is also anticipated to help in increasing student enrollments.

Offering this minor will have no negative impact to budget, facilities, faculty etc. Of the 6 prescribed courses, 5 are already currently offered at the Department of Geology and Geophysics. GEOS /GEOG 222 is the only new course which is a required course also for the major in Geosciences with an emphasis option in geospatial sciences. Therefore, no new course needs to be especially developed for this minor.

D. IMPACTS ON PROGRAMS/DEPTS:

*What programs/departments will be affected by this proposed action?
Include information on the Programs/Departments contacted (e.g., email, memo)*

The Department of Geology and Geophysics and the Geography Department are heavily vested in Geospatial Sciences. Faculty and leadership of both Departments have been working closely over the last year not only to raise the bar for geospatial science education, but also to make it widely appealing and accessible. This minor strengthens those ongoing efforts.

F. PERSONNEL DIRECTLY INVOLVED WITH THE MINOR:

List faculty currently teaching the required and elective (if any) courses, with a brief statement of duties and qualifications.

All courses listed are taught by tenured or tenure-track faculty in the Department of Geology and Geophysics. All lead instructors of the listed courses have PhD degrees or an MSc degree followed by several years of experience in the subject area (see list below). These course offerings are a part of their normal workload assignments.

GEOS F101X--The Dynamic Earth	(Instructor: Newberry)
GEOS F112X--The History of Earth and Life	(Instructor: Fowell)
GEOS/GEOG F222--Fundamentals of Geospatial Sciences	(Prakash/Verbyla)
GEOS F225--Field and Computer Methods in Geology	(Instructors: Newberry/ Wyatt)
GEOS F458--Geoscience Applications of GPS and GIS	(Instructor: Prakash/Wyatt)
GEOS F422--Geoscience Applications of Remote Sensing	(Instructor: Prakash)


G. RELATIONSHIP OF THE PROPOSED MINOR'S OBJECTIVES TO THE "PURPOSES OF THE UNIVERSITY".


Include additional justifying information to support creation of the minor such as projected and present enrollments; need or public demand for the minor; support of other programs by the minor's creation, etc.


This minor is anticipated to:

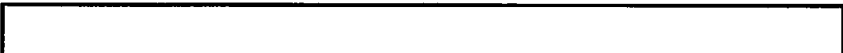
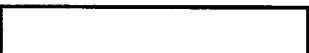
- have high appeal
- improve enrollments
- provide experiential learning as courses have hands- on lab component)
- prepare students to join the industry and be successful

APPROVALS:

	Date	9/23/11
Signature, Chair, Program/Department of:	Dept. of Geology + Geophysics	

	Date	10/5/11
Signature, Chair, College/School Curriculum Council for:		

	Date	Oct 7, 2011
Signature, Dean, College/School of:	CNSU	

ALL SIGNATURES MUST BE OBTAINED PRIOR TO SUBMISSION TO THE GOVERNANCE OFFICE		
	Date	
Signature, Chair, UAF Faculty Senate Curriculum Review Committee		

Final approval will be at the level of the Chancellor or Chancellor's Designee, following vote of approval by the Faculty Senate.
