

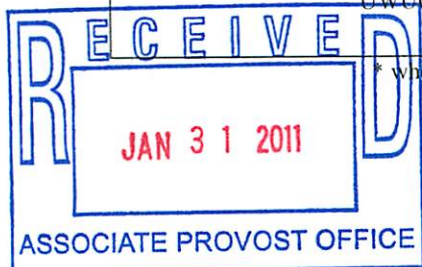
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		10-580.	App - 4/5/11	App 4/19/11

**Curriculum Proposal Cover Sheet - University-Wide Undergraduate Curriculum Committee**

Contact Person Michael A. Poage	Email Address mpoage@iup.edu
Proposing Department/Unit Geosciences - Natural Sciences and Mathematics	Phone 724-357-5627

Check all appropriate lines and complete information as requested. Use a separate cover sheet for each course proposal and for each program proposal.

<b>1. Course Proposals (check all that apply)</b> <input type="checkbox"/> New Course <input type="checkbox"/> Course Prefix Change <input type="checkbox"/> Course Deletion <input type="checkbox"/> Course Revision <input type="checkbox"/> Course Number and/or Title Change <input type="checkbox"/> Catalog Description Change		
<i>Current Course prefix, number and full title</i>		<i>Proposed course prefix, number and full title, if changing</i>
<b>2. Additional Course Designations: check if appropriate</b> <input type="checkbox"/> This course is also proposed as a Liberal Studies Course. <input type="checkbox"/> Other: (e.g., Women's Studies, Pan-African) <input type="checkbox"/> This course is also proposed as an Honors College Course.		
<b>3. Program Proposals</b> <input type="checkbox"/> New Degree Program <input type="checkbox"/> Program Title Change <input checked="" type="checkbox"/> Program Revision <input type="checkbox"/> New Minor Program <input type="checkbox"/> New Track <input type="checkbox"/> Other		
<i>Current program name</i>		<i>Proposed program name, if changing</i>
<b>4. Approvals</b>		
Department Curriculum Committee Chair(s)	<i>[Signature]</i>	11/3/10
Department Chair(s)	<i>[Signature]</i>	11/3/10
College Curriculum Committee Chair	<i>[Signature]</i>	12/3/10
College Dean	<i>[Signature]</i>	12/3/10
Director of Liberal Studies *		
Director of Honors College *		
Provost *	<i>[Signature]</i>	2/2/11
Additional signatures as appropriate: (include title)		
UWUCC Co-Chairs	<i>[Signature]</i>	4-5-11



## **Part II. Description of Curriculum Change**

### **1. Catalog Description**

**Note:** This revised catalog description will apply to the Geoscience Department's B.S. in Geology/Geology Track, B.S. in Geology/Environmental Track, B.S. in Geology/Energy Resources Track, B.S. in Education-Earth and Space Science, and Minor in Geology. **A copy of the old catalog description is provided as an Appendix at the end of this proposal.**

Reflecting minor editorial changes and the addition of the new Energy Resources Track (proposal submitted concurrently with this proposal), the catalog description will be revised to read as follows:

Geology is the broad science that encompasses all aspects of the Earth system. In addition to the solid Earth, this system includes the oceans and atmosphere, climate change and most aspects of our immediate environment. Professional geologists are thus engaged in a wide range of activities, depending on their interests. Scientific questions addressed by geologists include: the evolution of life; the origin of volcanic activity; the assessment of volcanic and earthquake hazards; the evolution of our planetary neighbors; climate change; mineral and energy resources; and the human impact on our environment.

The Geoscience Department offers a B.S. degree in Geology that is divided into three tracks: Geology, Environmental, and Energy Resources. All tracks give students the necessary foundation to pursue a wide variety of career goals. In addition, we offer a B.S. degree in Earth and Space Science Education for those students who are interested in teaching. The degrees and courses in our program emphasize hands-on learning, including outdoor instruction, student-oriented research, and professional experiential learning opportunities. In addition to on-campus instruction and class-related field trips, the department also offers several regional geology Field Workshops, which take place in Newfoundland, the northern Rockies region, Florida and the Bahamas, and the American southwest.

The B.S. in Geology/Geology Track is designed for students who are interested in pursuing many of the various sub-disciplines in Geology, including Oceanography/Marine Geology, Climate Change, Volcanology, Paleontology, and Geophysics. There is also considerable overlap between geology and astronomy, as geologists study the evolution of other planetary bodies, such as the Moon, Mars and Venus; our curriculum reflects this link and provides the groundwork for planetary studies. The Geology Track thus provides students with the foundation needed to pursue a wide variety of careers, including research and graduate studies, or working as professional geologists for energy resource companies, environmental consulting firms, or federal and state regulatory agencies.

The B.S. in Geology/Environmental Track is designed for students who wish to pursue careers in the environmental field. In addition to air and water quality issues, pollution often impacts the subsurface in ways that are difficult to detect and remediate. Geologists therefore play a key role in dealing with complex environmental issues; the Environmental Track prepares students to solve a variety of environmental problems. Graduates from this track will be prepared for direct entry into jobs with federal or state agencies and private environmental consulting firms, as well as graduate studies.

The B.S. in Geology/Energy Resources Track is designed for students who wish to pursue careers in the energy sector. As the world's energy demands continue to grow, nations face the challenge of maintaining reliable energy supplies. Conventional oil, coal, and natural gas continue as mainstays of the energy industry, but renewable and/or carbon-neutral energy sources are gaining attention in response to

growing concerns about climate change and finite reserves of fossil fuels. Western Pennsylvania is a historic coal and natural gas producing region with the potential for significant growth in the natural gas industry due to development of the Marcellus Shale. The Energy Resources Track will prepare students for direct entry into the energy industry with a focus on the discovery and development of energy resources and geophysical exploration techniques.

The B.S. in Education-Earth and Space Science prepares students to become certified middle and high school teachers in Pennsylvania and other states. Earth and Space Science teachers in grades 7 to 12 teach subjects that require a broad and solid foundation in science. Coursework includes study of geology, meteorology, oceanography, and astronomy. A basic understanding of the cognate sciences, biology, chemistry, and physics, and mathematics is also an essential part of the major. Courses in the foundations of education and pedagogy complement the subject matter studies. Students create and present lessons, first in their courses and then in school classrooms, culminating in the student teaching experience in the final semester.

## List of courses and credits for the proposed revised program:

### Bachelor of Science - Geology/Environmental Track

#### Liberal Studies Requirements: 50

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications:

**Natural Science:** CHEM 111-112 or 113-114

**Mathematics:** MATH 121

**Liberal Studies Electives:** MATH 122, no courses with GEOS prefix

#### Major:

#### Required Courses: 59

BIOL 111	Principles of Biology I	4cr
GEOS 201	Foundations of Geology	4cr
GEOS 202	Quantitative Methods in the Geosciences	2cr
GEOS 203	Surficial Processes	4cr
GEOS 310	Environmental Geology <i>or</i> GEOS 311 Geochemistry	4cr
GEOS 312	Hydrogeology	3cr
One of the following:	GEOS 303, 401-402, 403-404, 405-406, 407-408 (1)	4cr
GEOS 470	Research Methods in the Geosciences	2cr
GEOS 480	Geoscience Seminar	2cr
PHYS 111	Physics I Lecture	3cr
PHYS 121	Physics I Lab	1cr

#### Controlled Electives: 26cr

Select 26 credits from the following list (2):

One 100-level or 200-level GEOS course

Any 300-level GEOS course

Any 400-level GEOS course

Foreign Language Intermediate Level

BIOL 112, 250

CHEM 231, 232, 322, 323, 341

GEOG 415, 419

MATH 216 or 217, 241

PHYS 112-122, 342

COSC 110, 210, 250, 310, 362

#### Free Electives: 11

#### Total Degree Requirements: 120

(1) Up to 4cr of a summer field camp, internship, or independent study, all of which must be approved by the department, may substitute for GEOS 303 or a Geoscience Field Workshop.

(2) Only one Geoscience Field Workshop (including prerequisite 1cr Seminar) may be applied toward controlled electives. Up to 12cr from non-GEOS courses may be applied toward controlled electives. 6cr of foreign language may be applied toward controlled electives provided Intermediate-Level is successfully attained.

## 2. Summary of Changes

### 2 (a). Comparisons of current and proposed programs

#### Bachelor of Science—

#### Geology/Environmental Track

(Current)

**Liberal Studies:** As outlined in Liberal Studies section with the following specifications:

**Mathematics:** MATH 121

**Natural Science:** CHEM 111-112 or CHEM 113-114

**Liberal Studies Electives:** 4cr., MATH 122, no courses with GEOS prefix

**Major:**

#### Required Courses:

GEOS 201 Foundations of Geology 4cr

GEOS 202 Quantitative Methods in the Geosciences 2cr

GEOS 203 Surficial Processes 4cr

GEOS 310 Environmental Geology *or* 4cr

GEOS 311 Geochemistry

GEOS 312 Hydrogeology 3cr

One of the following: (1) 4cr

GEOS 303, 401-402, 403-404, 405-406, 407-408

GEOS 470 Research Methods in the Geosciences 2cr

GEOS 480 Geoscience Seminar 2cr

BIOL 111 Principles of Biology I 4cr

PHYS 111 Physics I Lecture 3cr

PHYS 121 Physics I Lab 1cr

#### Controlled Electives:

Select 20cr from the following list: (2)

One 100- or 200-level GEOS course

Any 300-level GEOS course

Any 400-level GEOS course

BIOL 112, 250

CHEM 231, 232, 322, 323, 341

GEOG 316, 415

MATH 216 or 217, 241

PHYS 112-122, 342

COSC 250, 310, 362

#### Other Requirements:

Foreign Language Intermediate-Level (3)

#### Free Electives:

#### Total Degree Requirements:

(1) Up to 4cr of a summer field camp, internship, or independent study, all of which must be approved by the department, may substitute for GEOS 303 or a Geoscience Field Workshop.

(2) Only one Geoscience Field Workshop (including prerequisite 1cr Seminar) may be applied toward controlled electives. Credits from up to two non-GEOS courses may be applied toward controlled electives.

(3) 6cr of computer language may substitute for the foreign language requirement: COSC 110 and 210 (recommended), other higher-level COSC courses with department permission in consultation with the Computer Science Department.

#### Bachelor of Science—

#### Geology/Environmental Track

(Proposed)

**50 Liberal Studies:** As outlined in Liberal Studies section with the following specifications:

**Mathematics:** MATH 121

**Natural Science:** CHEM 111-112 or CHEM 113-114

**Liberal Studies Electives:** 4cr., MATH 122, no courses with GEOS prefix

**53 Major:**

#### Required Courses:

BIOL 111 Principles of Biology I 4cr

GEOS 201 Foundations of Geology 4cr

GEOS 202 Quantitative Methods in the Geosciences 2cr

GEOS 203 Surficial Processes 4cr

GEOS 310 Environmental Geology *or* 4cr

GEOS 311 Geochemistry

GEOS 312 Hydrogeology 3cr

One of the following: (1) 4cr

GEOS 303, 401-402, 403-404, 405-406, 407-408

GEOS 470 Research Methods in the Geosciences 2cr

GEOS 480 Geoscience Seminar 2cr

PHYS 111 Physics I Lecture 3cr

PHYS 121 Physics I Lab 1cr

#### Controlled Electives:

Select 26cr from the following list: (2)

One 100- or 200-level GEOS course

Any 300-level GEOS course

Any 400-level GEOS course

Foreign Language Intermediate-Level

BIOL 112, 250

CHEM 231, 232, 322, 323, 341

GEOG 415, 419

MATH 216 or 217, 241

PHYS 112-122, 342

COSC 110, 210, 250, 310, 362

**0-6**

0-6cr

**11-17**

#### Free Electives:

**50**

**59**

4cr

4cr

2cr

4cr

4cr

4cr

3cr

4cr

2cr

2cr

3cr

1cr

26cr

**11**

**120**

(1) Up to 4cr of a summer field camp, internship, or independent study, all of which must be approved by the department, may substitute for GEOS 303 or a Geoscience Field Workshop.

(2) Only one Geoscience Field Workshop (including prerequisite 1cr Seminar) may be applied toward controlled electives. Up to 12cr from non-GEOS courses may be applied toward controlled electives. 6cr of foreign language may be applied toward controlled electives provided Intermediate-Level is successfully attained.

### List of Associated Changes:

1. We propose to change the Foreign Language Intermediate-Level requirement to an option within the Controlled Electives.
2. We propose to replace GEOG 316 Introduction to Geographic Information Systems to GEOG 419 Geographic Information Systems (GIS) for Environmental Applications as a Controlled Electives option.
3. We propose to add COSC 110 and COSC 210 (currently an acceptable substitute for the Foreign Language Intermediate-Level requirement) to Controlled Elective options.
4. With the Foreign Language Intermediate-Level requirement moved to the Controlled Electives section, we propose to increase to twelve the number of non-GEOS credits that can be applied toward controlled electives. We stipulate that 6cr of foreign language may be applied toward controlled electives provided Intermediate-Level is successfully attained.

### 3. Rationale for Changes

Note: Numbers correspond to the numbers used in the List of Associated Changes above.

1. During the 2008-2009 academic year, the College of Natural Sciences and Mathematics' Curriculum Committee voted to allow the Biochemistry Program to eliminate the College's Foreign Language Requirement. All subsequent parties in the IUP curriculum process similarly approved this change.

The Department of Geoscience does not consider the study of a foreign language to be an *essential* component of an undergraduate education in the geosciences. We do recognize the broad educational value of studying a foreign language, but also recognize that it has minimal *predictable* value toward a career in the geosciences. A survey of about twenty undergraduate geology/geoscience programs at other academic institutions appears to support this; among those investigated, no departments specifically require the study of a foreign language where the university or college *does not* maintain such a requirement. We could find no undergraduate geoscience departments that maintained a foreign language requirement independent of their college or university. Further, a similar survey of approximately twenty geoscience graduate programs shows none with either a graduation or entrance requirement of foreign language proficiency.

Based on these observations, the Department of Geoscience proposes to change the Foreign Language Intermediate-Level requirement to an option within the Environmental Track's controlled electives. Students who wish to include foreign language study in their geoscience program may still do so and apply the same number of credits toward program requirements as were allowed under the NSM College Foreign Language Requirement. Students who do not wish to study a foreign language will have to take an equivalent number of additional controlled electives from the list of options.

2. GEOG 419 Geographic Information Systems (GIS) for Environmental Applications is a new course in the Department of Geography and Regional Planning. It is a more appropriate course to include in controlled electives for Geoscience majors than GEOG 316 Introduction to Geographic Information Systems as it focuses on environmental applications and does not have a specified course for a prerequisite.

3. Under the current program, successful completion of COSC 110 and COSC 210 satisfies the Foreign Language Intermediate-Level requirement. We propose to leave open the option for students to take these courses by adding them to the list of Controlled Electives. Further, we propose to change the number of

non-GEOS credits that can be applied to controlled electives from two courses (usually 6cr) to 12cr to accommodate who choose to take Computer Science as part of their Geoscience program (see #4 below).

4. We propose to change the number of non-GEOS credits that can be applied to controlled electives from two courses (usually 6cr) to 12cr. This will still leave open the option for students to take a foreign language as part of their Geoscience program; if they choose not to, they must take additional controlled electives from the listed options. Students may apply 6cr of foreign language to controlled electives only if they achieve Intermediate-Level.

### **Part III. Implementation**

#### **1. How will the proposed revision affect students already in the existing program?**

We anticipate full implementation of the revised programs in Fall 2011. Students who are already enrolled in the Environmental Track will not be affected by these changes unless they are part way through achieving intermediate-level proficiency and opt to take other controlled electives instead. If a student has already (prior to Fall 2011) been granted an exemption or placed out of language courses based on a credit examination, the Geoscience Department will honor those credits and allow them to be applied toward the controlled electives. In any case, students will have more rather than fewer options to satisfy the new requirements, and in no case will students be forced to "waste" earned credits.

#### **2. Are faculty resources adequate? If you are not requesting or have not been authorized to hire additional faculty, demonstrate how this program will fit into the schedule(s) of current faculty.**

No additional faculty resources are required.

#### **3. Are other resources adequate?**

Yes, there are no program changes that require facilities or resources not already available.

#### **4. Do you expect an increase or decrease in the number of students as a result of these revisions? If so, how will the department adjust?**

We do not expect these program revisions to significantly change the number of majors in the Environmental Track. We may see a small increase in the number of students enrolled in our upper-level classes if some do in fact opt out of foreign language study as part of the program. There is currently room in most if not all of our upper-level classes for a modest increase in students.

### **Part IV. Periodic Assessment**

The Department of Geoscience has in place an assessment plan approved by the IUP curriculum process during our last major curriculum revision (2007-2009). This approved assessment plan is summarized below.

#### **1. Describe the evaluation plan. Include evaluation criteria. Specify how student input will be incorporated into the evaluation process.**

During retreats and planning sessions conducted as part of our five-year reviews in 2004-2005 and 2009-2010, the Geoscience Department came to the following consensus on the goals for students in our three major programs (Geology, Environmental Geology & Earth & Space Science Education). These goals are:

1. Effective oral and written communication skills:
  - a. giving a research talk (for geology/environmental majors)
  - b. teaching a lesson plan (for education majors)
2. Quantitative skills appropriate for earth science problems

3. Professional skills need for field, lab and computer tasks:
  - a. identify common rocks and minerals
  - b. keep a detailed and accurate field notebook
  - c. use a Brunton Compass
4. Knowledge of the critical content areas:
  - a. plate tectonic theory
  - b. organic evolution
  - c. environmental issues

Our current methods of student learning outcomes assessment have been streamlined and simplified to focus primarily on the measurement of skills and content knowledge at the freshman-level, and then compare those to measurements of the same skills and knowledge at the junior and senior levels. This allows us to look at the overall gains in outcome success over the course of our major programs, while allowing our students to take many different paths through our flexible curriculum.

1. As seniors, geology, environmental and energy track students are required to take GEOS 480 Geoscience Seminar and present talks at Geoscience Day. These students will be rated on the writing of their abstract, their oral presentation, the quantitative methods used in their research and their demonstration of adequate content knowledge. A rubric has been designed to focus on the desired student learning outcomes and facilitate long-term data acquisition. Education students who are not required to take GEOS 480 Geoscience Seminar will initially be evaluated for the same set of desired skills based on their student teaching experiences as evaluated by themselves, their faculty supervisors and their cooperating teachers. The department will work to establish an evening equivalent to Geoscience Day for education students, where they can present a lesson that they taught to actual students in their classrooms for faculty rubric evaluation.

2. Quantitative skills appropriate for earth science problems will be assessed for freshmen in their required GEOS 202 Quantitative Methods in the Geosciences course and then again for juniors and seniors in GEOS 470 Research Methods in the Geosciences, as well as GEOS 480 Geoscience Seminar. Learning outcomes will be assessed through problem-solving modules and applied research techniques.

3. Professional skills will be directly measured and evaluated in courses as follows:

Rock & Mineral ID: GEOS 201 Foundations of Geology (freshmen), GEOS 470 Research Methods in the Geosciences (juniors)

Field Notebooks: GEOS 203 Surficial Processes (freshmen) & GEOS 303 or 401-408 (Field Geology or Field Workshops; juniors and seniors)

Brunton compass use: GEOS 201 Foundations of Geology (freshmen), GEOS 470 Research Methods in the Geosciences (juniors)

Software Skills: GEOS 202 Quantitative Methods in the Geosciences (freshmen), GEOS 470 Research Methods in the Geosciences (juniors)

4. Knowledge of the critical content areas will be directly assessed in required courses as follows:

Plate tectonic theory: GEOS 203 Surficial Processes (freshmen) & GEOS 303 or 401-408 (Field Geology or Field Workshops; juniors and seniors)

Organic evolution: GEOS 201 Foundations of Geology (freshmen); GEOS 353 Paleontology (juniors and seniors)

Environmental issues: GEOS 203 Surficial Processes (freshmen); GEOS 370 Oceanography, GEOS 371 Meteorology (juniors and seniors)



## **2. Specify the frequency of the evaluations.**

Assessment data will be collected annually by individual faculty members and reported through the use of Qualtrix faculty surveys and TracDat database archiving. Additional entrance and exit surveys of students along with content inventory analysis will be used to supplement course-level assessment as needed. Collectively, department faculty will evaluate and discuss program revisions during annual daylong meetings and modify criteria and assessment strategies as needed. A full program assessment will be performed during every 5-year departmental review; our next review is currently scheduled for 2015.

## **3. Identify the evaluating entity.**

We have instituted a simple set of tests for each relevant course that will tell us if our students are actually learning and using the skills they had been taught. We have designed rubrics to facilitate this process and have begun implementing annual program assessments as per our 2005 five-year Academic Program Review. In addition, we are creating a senior 'exit interview' in an online questionnaire format to find out if students' own learning goals were met by program. We will also continue administering our alumni questionnaire (give a year or two after graduation to each cohort of students) by putting it in an online format as well.

## **Part V. Course Proposals**

There are no course proposals associated with the proposed program changes.

## **Part VI. Letters of Support or Acknowledgement**

The Geoscience Department has contacted the following departments with respect to program changes that may affect them. Letters to departments and received responses are attached.

*Department of Geography and Regional Planning:* no response received at time of submission

*Department of Computer Science:* no response received at time of submission; Dr. Shubra has indicated that the matter has been forwarded to the chair of the Department Curriculum Committee.

*Department of French and German:* no response received at time of submission

*Department of Spanish:* unofficial response received indicating lack of support

*Critical Languages Program:* no response received at time of submission

## **Appendix: Old Catalog Description**

Geology is a far-ranging science and encompasses various aspects of the Earth system. In addition to the solid Earth, this system includes the oceans and atmosphere, climate change, and most aspects of our immediate environment. Professional geologists are thus engaged in a wide range of activities, depending on their interests. Scientific questions addressed by geologists include the evolution of life, the origin of volcanic activity, the assessment of volcanic and earthquake hazards, the evolution of our planetary neighbors, climate change, and perhaps most importantly, the human impact on our environment.

The department offers a B.S. degree with a major in Geology that is divided into two tracks: Geology and Environmental. Either track gives students the necessary foundation to pursue a wide variety of career goals. In addition, education degrees are offered for students who are interested in teaching. The degrees including outdoor instruction and student-oriented research and professional experiential learning opportunities. In addition to on-campus instruction and class-related field trips, the department also offers several regional geology Field Workshops, which take place in Newfoundland, the Northern Rockies region, Florida and the Bahamas, and the American Southwest.

The B.S. degree with a major in Geology/Geology Track is designed for students who are interested in pursuing any of the various subdisciplines in geology, including oceanography/marine geology, climate change, volcanology, paleontology, meteorology, and geophysics. There also is considerable overlap between geology and astronomy, as geologists study the evolution of other planetary bodies, such as the Moon, Mars, and Venus; the curriculum reflects this link and provides the groundwork for planetary studies. The Geology Track thus provides students with the foundation needed to pursue a wide variety of career goals, including research (and postgraduate studies), teaching, or careers as professional geologists working with private businesses, environmental firms, or as consultants for federal and state agencies.

The B.S. degree with a major in Geology/Environmental Track is designed for students who wish to pursue careers in the rapidly expanding environmental field. While our planet has evolved over a 4.5 billion-year history, our presence has had a significant impact upon our surroundings, in spite of our brief time of residence. Geologists play a key role in dealing with environmental issues, and the Environmental Track prepares students to solve environmental problems. Graduates from this track will be prepared for direct entry into jobs with federal or state agencies and private environmental consulting firms, as well as postgraduate studies.

The B.S. in Education degree with a major in Earth and Space Science prepares students to become certified teachers in Pennsylvania and other states. Earth and Space Science teachers in middle and high school grades teach subjects that require a broad and solid foundation in science. Coursework includes study of geology, meteorology, oceanography, and astronomy. A basic understanding of the cognate sciences, biology, chemistry, physics, and mathematics is also an essential part of the major. Courses in pedagogy, including the teaching of English language learners and students with special needs, complement the subject matter studies. Students create and present lessons, first in Geoscience courses and then in school classrooms, culminating in the student teaching experience in the last semester.

The Minor in Geology is designed for students who desire a background in Geology, in conjunction with degrees in business or one of the social or physical sciences.

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**Subject: Requesting letter of support for Geoscience program revisions and new track**  
**From: Michael A Poage**  
**Date: 10/18/10 02:10 PM**  
**To: john.benhardt@iup.edu**

*Geography and Regional Planning*

- Attached Files**
- Geology Track Proposal.doc (124 KB)
  - Environmental Track Proposal.doc (124 KB)
  - Energy Track Proposal.doc (4892 KB)

Dear Dr. Benhart,

The Geoscience Department is preparing some minor revisions to our Geology and Environmental Tracks, which will affect the Department of Geography and Regional Planning (see attached proposals). One proposed modification to these tracks is a change in the Controlled Elective options, replacing GEOG 316 Introduction to GIS with GEOG 419 GIS for Environmental Applications. We feel that GEOG 419 is more appropriate for Geoscience majors as it focuses on environmental applications and does not have a specified prerequisite.

In addition, we are also proposing a new Energy Resources Track (see attached proposal) within our B.S. Geology degree program. As part of the Controlled Elective options for this new track, we would like to include GEOG 415 Remote Sensing and GEOG 419 GIS for Environmental Applications. GEOG 415 is currently listed as a Controlled Elective for our Geology and Environmental Tracks. To help gauge the potential impact on your department, we anticipate that the addition of this new track will result in a modest increase in Geoscience majors of at most 10-15 students per year.

We are requesting a letter of support from the Department of Geography and Regional Planning with regard to the above-mentioned change in our Geology and Environmental Tracks, and with regard to the inclusion of GEOG 415 and 419 as Controlled Electives in our new Energy Resources Track. Thank you for consideration of this request. Should you have any questions or concerns, please do not hesitate to contact me at mpoage@iup.edu or 7-5627.

Sincerely,

Michael Poage  
Chair, Geoscience Department Curriculum Committee

*No response received as of 11/3/10*

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**Subject: Re: Requesting letter of support for Geoscience program revisions and new track**

**From:** Charles Shubra

**Date:** 10/19/10 01:49 PM

**To:** Michael A Poage

**Cc:** Terry Fries

Computer Science

Hi Michael,

I have referred this matter to Dr. Terry Fries the chairperson for the departmental curriculum committee. The committee will draft a letter and share it with the faculty. I hope that you will have the requested response within two weeks.

From: "Michael A Poage" <mpoage@iup.edu>

Sent: Monday 18 October 2010 2:16 PM

To: <charles.shubra@iup.edu>

Subject: Requesting letter of support for Geoscience program revisions and new track

Dear Dr. Shubra,

The Geoscience Department is preparing revisions to our Geology and Environmental Tracks, which will affect the Department of Computer Science (see attached proposals). At present, students in both of these tracks are required to satisfy the College of Natural Sciences and Mathematics Foreign Language Requirement. As you are probably aware, taking COSC 110 and 210 is, for geoscience students, an acceptable alternative to the typical Intermediate-Level Foreign Language.

In 2008-2009, the Biochemistry Program was successful in its proposal to eliminate the NSM College Foreign Language Requirement from its curriculum. The Geoscience Department, recognizing the broader value of studying a foreign language but also recognizing the minimal predictable value that it has for those entering the geoscience workforce or graduate school in geology, is currently proposing to move foreign language study to the Controlled Elective component of our Geology and Environmental Tracks. As a part of this change, we are also proposing to move COSC 110 and 210 from a footnote-specified alternative to the Foreign Language Requirement to the Controlled Elective section of these tracks. In terms of the effect on your department, students in our Geology and Environmental Tracks will no longer be required to take a foreign language or COSC 110 and 210 as the alternative. However, they may still do so should they choose to use their Controlled Elective Credits in this way. Thus it is possible with these changes that you will see a change in the number of Geoscience students from these two tracks taking COSC 110 and 210.

In addition, we are also proposing a new Energy Resources Track (see attached proposal) within our B.S. Geology degree program. As part of the Controlled Elective options for this new track and to be consistent with Controlled Elective options for our current Geology and Environmental Tracks, we would like to include COSC 110, 210, 250,

No official response received as of 11/3/10.

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↵ ↻ ✕

**Subject: Re: Requesting letter of acknowledgment for Geoscience curriculum changes**

**From: Sean McDaniel**

**Date: 10/24/10 03:07 PM**

**To: Michael A Poage**

*Spanish*

Michael,

I am sorry I haven't responded sooner. We've had quite a hectic 10 or so days.

I assure you that here soon you will receive a letter of acknowledgement of your proposed changes, although, as you can probably imagine, I don't think I'll be able to say that I support them.

Sean

*Unofficial response indicating lack of support. We anticipate receipt of an official response.*

Sean McDaniel  
Professor of Spanish and Chair  
Department of Spanish  
Indiana University of Pennsylvania  
Indiana, PA 15705  
Office/Fax 724-357-7532/724-357-1268

On Oct 18, 2010, at 2:42 PM, Michael A Poage wrote:

> Dear Dr. McDaniel,

>

> The Geoscience Department is preparing revisions to our Geology and Environmental Tracks, which may affect the Department of Spanish (see attached proposals).

>

> At present, students in both of these tracks are required to satisfy the College of Natural Sciences and Mathematics Intermediate-Level Foreign Language Requirement with the alternative of taking COSC 110 and 210 instead. In 2008-9, the Biochemistry Program was successful in its proposal to eliminate the NSM College Foreign Language Requirement from its curriculum. The Geoscience Department, recognizing the broader value of studying a foreign language but also recognizing that there are other areas of study with equal or greater predictable value to those entering the geoscience workforce or graduate school in geology, is currently proposing to move foreign language study to the Controlled Elective component of our Geology and Environmental Tracks. In terms of the potential effect on your department, students in these tracks will no longer be specifically required to successfully complete foreign language study at the intermediate level (or the COSC 110/210 alternative), however, they may still do so should they choose to use their Controlled Elective credits in this way.

>

> In addition, we are also proposing a new Energy Resources Track (see attached proposal). As part of the Controlled Electives component for this new track, and to be consistent with Controlled Elective options for our current Geology and Environmental Tracks, we would like to include a Foreign Language Intermediate-Level option. In this scenario, the Energy Resources Track students could choose to study Spanish to satisfy this option. To help gauge the potential impact on your department, we anticipate that the addition of this new track will result in a modest increase in Geoscience majors of at most 10-15 students per year.

>

> We are requesting a letter of acknowledgement from the Department of Spanish with regard to the above-mentioned changes in our Geology and Environmental Tracks, and with regard to the inclusion of the Foreign Language Intermediate-Level option in the Controlled Electives component of our new Energy Resources Track. Thank you for consideration of this request.

Should you have any questions or concerns, please do not hesitate to contact me at mpoage@iup.edu or 7-5627.

>

> Sincerely,

>

.....

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**Subject: Requesting letter of acknowledgment for Geoscience curriculum changes****From:** Michael A Poage**Date:** 10/18/10 02:51 PM**To:** stuart.chandler@iup.edu

Critical Languages Program

**Attached Files**

- Geology Track Proposal.doc (124 KB)
- Environmental Track Proposal.doc (124 KB)
- Energy Track Proposal.doc (4892 KB)

Dear Dr. Chandler,

The Geoscience Department is preparing revisions to our Geology and Environmental Tracks, which may affect the Critical Languages Program (see attached proposals).

At present, students in both of these tracks are required to satisfy the College of Natural Sciences and Mathematics Intermediate-Level Foreign Language Requirement with the alternative of taking COSC 110 and 210 instead. In 2008-9, the Biochemistry Program was successful in its proposal to eliminate the NSM College Foreign Language Requirement from its curriculum. The Geoscience Department, recognizing the broader value of studying a foreign language but also recognizing that there are other areas of study with equal or greater predictable value to those entering the geoscience workforce or graduate school in geology, is currently proposing to move foreign language study to the Controlled Elective component of our Geology and Environmental Tracks. In terms of the potential effect on your program, students in these tracks will no longer be specifically required to successfully complete foreign language study at the intermediate level (or the COSC 110/210 alternative), however, they may still do so should they choose to use their Controlled Elective credits in this way.

In addition, we are also proposing a new Energy Resources Track (see attached proposal). As part of the Controlled Electives component for this new track, and to be consistent with Controlled Elective options for our Geology and Environmental Tracks, we would like to include a Foreign Language Intermediate-Level option. In this scenario, the Energy Resources Track students could choose to study one of the Critical Languages to satisfy this option. To help gauge the potential impact on your program, we anticipate that the addition of this new track will result in a modest increase in Geoscience majors of at most 10-15 students per year.

We are requesting a letter of acknowledgement from the Director of the Critical Languages Program with regard to the above-mentioned changes in our Geology and Environmental Tracks, and with regard to the inclusion of the Foreign Language Intermediate-Level option in the Controlled Electives component of our new Energy Resources Track. Thank you for consideration of this request. Should you have any questions or concerns, please do not hesitate to contact me at mpoage@iup.edu or 7-5627.

Sincerely,

Michael Poage

Chair, Geoscience Department Curriculum Committee

Take Address

No response received as of 11/3/10.