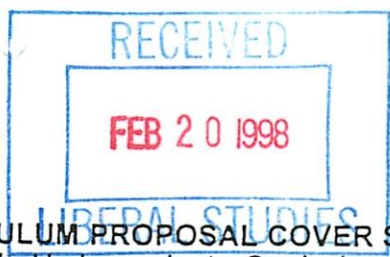


LSC Use Only  
Number: \_\_\_\_\_  
Submission Date: \_\_\_\_\_  
Action-Date: \_\_\_\_\_



UWUCC USE Only  
Number: 97-53  
Submission Date: App. 4/14/98  
Action-Date: Senate app. 5/5/98

**CURRICULUM PROPOSAL COVER SHEET**  
University-Wide Undergraduate Curriculum Committee

**I. CONTACT**

Contact Person Connie J. Sutton Phone 5626  
Department Geoscience

**II. PROPOSAL TYPE (Check All Appropriate Lines)**

**COURSE** \_\_\_\_\_  
Suggested 20 character title

New Course\* \_\_\_\_\_  
Course Number and Full Title

Course Revision \_\_\_\_\_  
Course Number and Full Title

Liberal Studies Approval + \_\_\_\_\_  
for new or existing course Course Number and Full Title

Course Deletion \_\_\_\_\_  
Course Number and Full Title

Number and/or Title Change \_\_\_\_\_  
Old Number and/or Full Old Title  
New Number and/or Full New Title

Course or Catalog Description Change \_\_\_\_\_  
Course Number and Full Title

**PROGRAM:**  Major  Minor  Track

New Program\* \_\_\_\_\_  
Program Name

Program Revision\* Earth & Space Science Education  
Program Name

Program Deletion\* \_\_\_\_\_  
Program Name

Title Change \_\_\_\_\_  
Old Program Name  
New Program Name

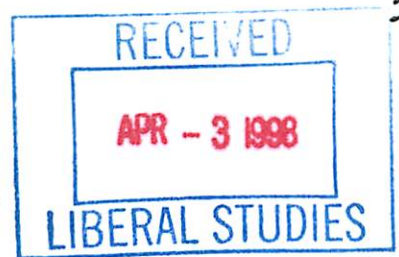
**III. Approvals (signatures and date)**

*John R. Johnson  
Academic Preceptor  
Preparation*

Darlene Richardson Department Curriculum Committee  
[Signature] College Curriculum Committee  
Darlene Richardson + Director of Liberal Studies (where applicable)

[Signature] Department Chair  
John D. Eck College Dean  
[Signature] \*Provost (where applicable)

Revised



# Program Revision - B.S. in Earth & Space Science Education

Part I. CURRICULUM PROPOSAL COVER SHEET - see front sign-off sheet  
 Revision in Liberal Studies portion of major  
 Requested by Geoscience Department  
 Contact Person: Connie J. Sutton

## Part II. DESCRIPTION OF CURRICULUM CHANGE

1. The catalog description will not change.
  
2. Attached is a copy of the current and the proposed changes in the requirements for the B.S. in Education - Earth & Space Science. The changes involve:
  - a. moving an already required course (PY 111) from the heading of Major/Required to the heading Liberal Studies Electives
  - b. Adding an additional geology controlled elective to the program.
 This change will not alter the total number of credits required for graduation. The change will alter the total number of science credits required for the major, increasing it by three.

3. This change is necessitated to comply with national standards from NSTA (National Science Teachers Association) which have been adopted by NCATE for our accreditation. Standards II & III state that the science student must complete 48 hours in science. Their recommended breakdown is 32 in the major and 16 in other sciences. Our current program requires 47sh and therefore received an R (meets standard with reservation) during the last NCATE visit (see page 5). This proposal raises the total required hours in science to 50sh by adding 3 more credits of controlled electives in the major (from 6 sh to 9 sh). Because the Geoscience Department offers geoscience courses for non-majors, a list of these courses which are not acceptable as controlled electives is included in the program listing. In order to avoid raising the total number of credits for graduation, we propose to move a 3 sh science course (PY 111), which is already required in the list of other science requirements, to the area of Liberal Studies electives. The current program and proposed change are as follows:

<u>Current Program</u>		<u>Proposed Program</u>	
Required other science	20sh	Required other science	20sh
Required geoscience	27	Required geoscience	30
Total	47sh	Total	50sh

While the breakdown is not exactly the same as that recommended by NSTA, other IUP science departments have similar credit requirements as this proposal and have received NCATE approval.

Attached are "old" and "new" catalog descriptions and a copy of the NCATE review.

### **Part III. IMPLEMENTATION**

1. The proposed change will take effect for entering freshmen in September 1998 and will be published in the next University Catalog. Students already in the program will not be affected.
2. Faculty loads will not be affected. Students are already enrolled in PY 111; it is just being moved to a different category. Students will be required to enroll in an additional geology elective course. These courses are already offered for geology and environmental geoscience majors. Enrollment would increase with these students by 1 - 3 students per course and therefore would not affect faculty loads. There are presently about 20 students in the program.
3. Other resources are adequate for the change.
4. We expect that the program will remain having the same number of students.

### **Part IV. COURSE PROPOSALS**

1. There are no new courses being added, revised, or deleted as a result of this program revision.

### **PART V. LETTERS OF SUPPORT**

1. A letter of support from Liberal Studies is attached.

If you need further material or information, please contact me at X5626 or by e-mail at cjsutton.

# Bachelor of Science in Education - Earth and Space Science(\*)

Liberal Studies: As outlined in Liberal Studies section 55-56 with the following specifications:  
 Mathematics: MA 121  
 Natural Science: CH 111-112  
 Social Science: PC 101  
 Liberal Studies electives: CO 101, no courses with GS prefix

College: Professional Education Sequence: (1) 30  
 CM 301 Technology for Learning and Instruction 3sh  
 ED 242 Pre-student Teaching Clinical Experience I 1sh  
 ED 342 Pre-student Teaching Clinical Experience II 1sh  
 ED 441 Student Teaching 12sh  
 ED 442 School Law 1 sh  
 ED 451 Teaching Science in the Secondary School 3sh  
 EP 202 Educational Psychology 3sh  
 EP 377 Educational Tests and Measurements 3sh  
 FE 202 American Education in Theory and Practice 3sh

Major: 39  
 Required courses:  
 BI 103 General Biology I 4sh  
 GS 121 Physical Geology 3sh  
 GS 122 Physical Geology I Laboratory 1sh  
 GS 131 Historical Geology 3sh  
 GS 132 Historical Geology Laboratory 1sh  
 GS 341 Solar System 3sh  
 GS 342 Stellar Astronomy 3sh  
 GS 350 Operation of the Planetarium 1sh  
 GS 361 Physical Oceanography 3sh  
 GS 371 Meteorology I 3sh  
 PY 111 Physics I 3sh  
 PY 112 Physics II 3sh  
 PY 121 Physics I Laboratory 1sh  
 PY 122 Physics II Laboratory 1sh

Controlled electives:  
 Geology electives (not GS 110\*\*,141) 6sh

Other Requirements: 0

Free Electives: 0

Total Degree Requirements: 124-125

(\*) See requirements leading to teacher certification in the catalog section on Academic Policies, "Admission to Teacher Education."

(1) Special Education Competency Requirement: Revision pending will eliminate exam option and will require EX301 (2sh).

\*\* This course no longer exists.

Liberal Studies: As outlined in Liberal Studies section 55-56 With the following specifications:  
 Mathematics: MA 121  
 Natural Science: CH 111-112  
 Social Science: PC 101  
 Liberal Studies electives: CO 101, PY 111, no courses with GS

College: Professional Education Sequence: (1) 30  
 CM 301 Technology for Learning and Instruction 3sh  
 ED 242 Pre-student Teaching Clinical Experience I 1sh  
 ED 342 Pre-student Teaching Clinical Experience II 1sh  
 ED 441 Student Teaching 12sh  
 ED 442 School Law 1sh  
 ED 451 Teaching Science in the Secondary School 3sh  
 EP 202 Educational Psychology 3sh  
 EP 377 Educational Tests and Measurements 3sh  
 FE 202 American Education in Theory and Practice 3sh

Major: 39  
 Required courses:  
 BI 103 General Biology I 4sh  
 GS 121 Physical Geology 3sh  
 GS 122 Physical Geology Laboratory 1sh  
 GS 131 Historical Geology 3sh  
 GS 132 Historical Geology Laboratory 1sh  
 GS 341 Solar System 3sh  
 GS 342 Stellar Astronomy 3sh  
 GS 350 Operation of the Planetarium 1sh  
 GS 361 Physical Oceanography 3sh  
 GS 371 Meteorology I 3sh  
 PY 112 Physics II 3sh  
 PY 121 Physics I Laboratory 1sh  
 PY 122 Physics II Laboratory 1sh

Controlled electives:  
Geology electives (not GS 101,103,105,111,113,141) 9sh

Other Requirements: 0

Free Electives: 0

Total Degree Requirements: 124-125

(\*) See requirements to teacher certification in the catalog section On Academic Policies, "Admission to Teacher Education."

(1) Special Education Competency Requirement: Revision will eliminate exam option and will require EX 301 (2sh).

interdisciplinary relating humans to their environment.  
 Rating: + Comments:

\*II. Requires 32 s.h. of earth science including astronomy, geology, meteorology and oceanography (See Note 1).  
 Rating: R Comments: 27 hours are required; all areas are covered.

\*III. Requires 16 s.h. of supplemental science including biology, chemistry, and physics (See Note 2).  
 Rating: - Comments:

\*IV. Requires mathematics including precalculus (See Note 3).  
 Rating: - Comments:

>V. Requires study of science, technology and society issues and ethics related to earth science with emphasis on conservation of environment.  
 Rating: + Comments:

>VI. Requires experiences in designing, developing and evaluating laboratory, field and instructional activities.  
 Rating: + Comments:

KEY TO RATING OF STANDARDS: (+) Meets standard; (R) Meets standard with reservations. Should fully comply by next review; (-) does not meet the standard (0) more information is needed to determine compliance; (\*) these standards must be passed for a positive compliance rating; (>) two of these three standards must be passed for a positive compliance rating.

- NOTE 1: Must include 26 s.h. and 3 areas for an "R" rating.
- NOTE 2: Must include 13 s.h. and 2 fields for an "R" rating.
- NOTE 3: Algebra and analytical geometry or trigonometry are equivalent.
- NOTE 4: Semester hours may be calculated by multiplying quarter hours by 2/3.

OVERALL, THIS PROGRAM:

- Fully meets the standards
- Meets the standards with reservations
- Does not comply with standards for this program
- Information is needed to complete the review

November 12, 1997

To: Connie Sutton, Geoscience Department

From: Darlene Richardson, Director *Darlene Richardson*

Subject: Revision in the Liberal Studies portion of BS in Earth and Space Science Education

On November 6, 1997, the Liberal Studies Committee approved the revision in the Liberal Studies portion of the BS in Earth and Space Science Education. PY 111 will be added to the list of Liberal Studies Electives (PY 111 is approved as an LS elective). I reported this approval to the University-wide Undergraduate Curriculum Committee on November 11, 1997.

Copy: John Eck, Dean, College of Natural Sciences and Mathematics  
Frank Hall, Chair, Geoscience Department

Educational College-School Partnerships  
Indiana University of Pennsylvania  
104 Stouffer Hall  
Indiana, Pennsylvania 15705-1087

(412) 357-2485

February 19, 1998



To Whom It May Concern:

As the Convener of the Teacher Education Coordinator's Council of the Academy for Teacher Preparation, I am writing to inform you that at the January 26, 1998 Meeting of the Council Approval action was officially taken on the following curriculum change:

- a. Proposal from Geo Science to change the content course requirements in Earth and Space Sciences program. The change raises the required science content from 47-50 credits. This is to meet National Science Teachers Association standards and remedy a concern raised during the last NCATE review Motion by Joe Domaracki and seconded by Terry Peard, Passed unanimously.

A copy of a portion of the minutes of that meeting is attached as documentation of the approval that was officially given by this body.

Sincerely,

A handwritten signature in blue ink that reads 'John R. Johnson'.

John R. Johnson  
Convener, Teacher Education Coordinator's Council  
Academy for Teacher Preparation



Below is a copy of a portion of the minutes from the Teacher Education Coordinator's Council which reviewed and voted approval of curriculum changes

**To:** Coordinators of Teacher Education  
**CC:** John Butzow, Joyce Garrett  
**From:** John R. Johnson, Associate Dean, Educational College-School Partnerships  
**Date:** January 28, 1998  
**Re:** Minutes of the Teacher Education Coordinators Meeting – January 26, 1998

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The coordinators of Teacher Education met on Monday, January 26, 1998 at 3:30 PM in 109 Stouffer Hall.

Present: Jane Whisner, Richard Ciganko, Terry Peard, Joseph Bianco, Carole Bencich, Laureen Hurt, Connie Sutton, Linda Klingaman, Sally McCombie, Jack Lerner, Eileen Glisan, Joseph Domaracki, Diane Klein, Ken Hershman, Gail Gerlach, Clarice Reber, John Quirk, Lorraine Wilson, John Johnson- Convener

Excused: John Wood, Mary Enderson

Absent: Kurt Dudt, Marilyn Howe

1. Action on Minutes of November 1997 meeting as distributed by E-mail. Motion to approve by Joe Bianco and seconded by Carole Bencich Passed unanimously
2. Report of the Academy for Teacher Preparation Curriculum Review Committee . The Committee unanimously recommended the Teacher Education Coordinator's Council pass the following curriculum changes on proposals considered:. All items were approved on individual motions as noted below:
  - a. Name change from Home Economics Education to Family and Consumer Science Education Motion by Joe Bianco and seconded by Carole Bencich, passed unanimously
  - b. Rename ED 431 from Student Teaching in Home Economics to Student Teaching in Family and Consumer Sciences Motion by Carole Bencich and seconded by Terry Peard –Passed unanimously.
  - c. Proposal from Geo Science to change the content course requirements in Earth and Space Sciences program. The change raises the required science content from 47-50 credits. This is to meet National Science Teachers Association standards and remedy a concern raised during the last NCATE review Motion by Joe Domaracki and seconded by Terry Peard, Passed unanimously.
  - d. Math Education: (1) addition of EX 301, 2 s.h. Education of Students with Disabilities in Inclusive Secondary Settings; (2) Deletion of CM 301 Motion by Richard Ciganko and seconded by Connie Sutton Passes unanimously.



- e. **Social Studies Program: Proposal to include EX 301, 2 s.h. in History, Anthropology, Geography and Sociology Education programs and delete the Special Education Competency Exam Motion by Clarice Reber and seconded by Eileen Glisan Passed unanimously.**
- f. **Art Education: Proposal to replace EX 300 with EX 301 Motion by Joe Domaracki and seconded by Carole Bencich Passed Unanimously**