

AUG 25 1993

LSC Use Only
Number _____
Action _____
Date _____

UWUCC USE Only
Number 93-46
Action App 2/15/94
Date Sen App 3/1/94

CURRICULUM PROPOSAL COVER SHEET
University-Wide Undergraduate Curriculum Committee

I. TITLE/AUTHOR OF PROPOSAL

Course/Program Title: Bachelor of Science in Education - General Science
Suggested 20 character course title: _____
Department: _____
Contact Person: Connie Sutton, Coordinator; Frank Hall, Chairperson

II. If a course, is it being proposed for:

- _____ Course Approval/Revision Only
- _____ Course Approval/Revision and Liberal Studies Approval
- _____ Liberal Studies Approval Only (course previously approved by Senate.)

III. APPROVALS

Connie J. Sutton
Department Curriculum Committee
John Butts
College Curriculum Committee

Frank Hall
Department Chairperson
John Butts
* College Dean

Director of Liberal Studies
(where applicable)

Provost (where applicable)

* EACH COLLEGE DEAN MUST CONSULT WITH THE PROVOST BEFORE APPROVING CURRICULUM CHANGES. APPROVAL BY COLLEGE DEAN INDICATES THE PROPOSED CHANGE IS CONSISTENT WITH LONG RANGE PLANNING DOCUMENTS, ALL REQUESTS FOR RESOURCES IN THE PROPOSAL CAN BE MET, AND THE PROPOSAL HAS THE SUPPORT OF THE UNIVERSITY ADMINISTRATION.

III. TIMETABLE

Date Submitted:
to LSC _____
to UWUCC _____

Semester to be
implemented:
Fall 1994

Date to be
published
in Catalog
Fall 1994

PART II #2A.

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General Science Certification:

	<u>OLD PROGRAM</u>	<u>NEW PROGRAM</u>
Liberal Studies requirements:	55-56	55-56
College of Education requirements:	30	30
Major Requirements:	36*	39-40*
Other Requirements:	0	0
Free Electives:	2-3	0
Total:	124	124-126
*Required Major Courses:	24	24
Controlled Major Electives: One Track	12	15-16

Biology:

Old Track: BI 110 or 120, 272, 480, BI elective = 12

New Track: BI 110, 120, 272, BI elective = 16

Chemistry:

Old Track: CH 231, 321, 322 or 341 or 351 = 12

New Track: CH 231, 321, 351, 232 or 340 or 341 = 16

Geoscience:

Old Track: GS 121, 341 or 342, 361, 371 = 12

New Track: GS 121, 123, 131, 341 or 342, 361, 371 = 16

Physics:

Old Track: PY 222, 231, 242, 331 = 12

New Track: PY 222, 231, 242, 331, 350 = 15

NOTE: Also required of Physics Track is MA 124 - this adds 4 credits to the track - MA 124 will be counted as Liberal Studies elective.

Part II. 3. Rationale for change.

The proposed changes are necessitated by the national standards of NCATE. NCATE will not approve the program until these changes have been made. The NCATE team will be at IUP in November. Four additional science hours are required in the track portion of the major. This requires removing the elective credits which had been a part of the program. The addition will raise the credits for graduation from 124 to 125-126 credits.

Part III. Implementation

1. Beginning in Fall 94, students in the program will lose their 2-3 hours of elective credits. Students presently enrolled will follow the old program. We have an average of 3 students per year majoring in general science. Many of the biology, chemistry, earth science, and physics education majors also receive general science certification upon completion of the requirements for their science education major. For example, a physics education major may be certified in both physics education as well as general science education. The change in the tracks will not affect these double majors because they already take more than 16 hours in their science major.

2. Faculty teaching loads will not be affected by these changes because all of these courses are already offered and the impact will be no more than 3 "extra" students per year.

3. Because of the small number of students, resources will remain adequate.

4. We do not expect an increase in the number of students as a result of these revisions.

Part IV. no new courses added

Part V. Connie Sutton has received sign-off letters from each of the department chairs, but with the renovations in Weyandt Hall for asbestos abatement (which may last at least 12 months) the letters are packed in one of 20 boxes. The appropriate college committee has signed the cover sheet and we hope that the UWUCC will accept these unusual conditions and permit us to submit this proposal without hard copies of the support letters. The revisions of this program reflect the recommendations from these departments.

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Geoscience Department
Indiana University of Pennsylvania
114 Walsh Hall
Indiana, Pennsylvania 15705-1087


(412) 357-2379



April 20, 1993

Subject: NCATE Approval, re General Science Certification

To: Dr. John Butzow, Dean
College of Education

From: Mrs. Connie J. Sutton 
Geoscience Department

I have received recommendations from each of the science departments concerning the adjustment of requirements for General Science Certification. They, along with the old requirements, are shown on a chart which is attached. These changes need approval from the Curriculum Committee of COE and then by the Senate. The changes were necessitated because of NCATE's requirement of 16 additional hours in one science area after completion of the core of science requirements. Our program presently requires 12 additional hours. The addition of 4 hours will erase the elective credits of 2-3 hours and require the total credit program to be raised by 1-2 credits. Presently the total stands at 124 credits.

Please place this item on the agenda of our next meeting.

cc: Dean Cale
Dr. King

Catalog Copy:

1. There is no proposed change in the introductory narrative section which is listed under the Geoscience Department.
2. Listing of Courses:

Liberal Studies: As outlined in Liberal Studies section 55-56 with the following specifications:

Mathematics: MA 121 (1)

Natural Science: CH 111-112

Social Science: PC 101

Liberal Studies electives: BE/CO/IM 101, no courses with prefix of chosen track in major

College: 30

Professional Education Sequence

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 Secondary Schools 3sh

EP 202 Educational Psychology 3sh

EP 377 Educational Tests and Measurements 3sh

FE 202 American Education in Theory and Practice 3sh

Major: 39-40

Required Courses:

BI 103 General Biology I 4sh

BI 104 General Biology II 4sh

GS 101 Earth Science (GO) 3sh

GS 102 Earth Science (GO) Lab 1sh

GS 103 Earth Science (MA) 3sh

GS 104 Earth Science (MA) Lab 1sh

PY 111 Physics I Lecture 3sh

PY 112 Physics II Lecture 3sh

PY 121 Physics I Lab 1sh

PY 122 Physics II Lab 1sh

Controlled Electives: 15-16sh

Biology Track: BI 110, 120 272, BI elective

Chemistry Track: CH 231, 321, 351, 232 or 340 or 341

Geoscience Track: GS 121, 123, 131, 341 or 342, 361, 371

Physics Track: PY 222, 231, 242, 331, 350 (1)

Other Requirements: 0

Free Electives: 0

Total Degree Requirements: 124-126

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

(1) Note: If Physics track is elected, MA 123 and MA 124 are required.

APRIL 5, 1993

Subject: NCATE Approval, re General Science, Geoscience Track

To: Connie Sutton
General Science Coordinator

From: Frank Hall, Chair *FHW Hall*
Geoscience Department

At the meeting of the Geoscience Department on Friday, April 2, 1993, the faculty voted to increase the credits in the major of General Science Education, Geoscience Track from 12 credits to 16 credits using the following courses:

GS 121 Physical Geology	3sh
GS 123 Intensive Phys Geology Lab	1sh
GS 131 Historical Geology	3sh
GS 341 Solar System	
OR	
GS 342 Stellar Astronomy	3sh
GS 361 Oceanography	3sh
GS 371 Meteorology	3sh

MEMO

To: Connie Sutton

From: Pothan Varughese



Date: 3/26/93

Subject: Chemistry for General Science Program

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The Chemistry track for the General Science Program is modified as follows:

Required core courses:

CH 231	Organic Chemistry I	4sh
CH 321	Quantitative Analysis	4sh
CH 351	Biochemistry	4sh

Required additional course: ONE of the following:

CH 232	Organic Chemistry II	4sh
CH 340	P.Chem for Biol.Sciences	3sh
CH 341	Physical Chemistry II I	4sh

DATE: March 22, 1993

SUBJECT: NCATE Approval of General
Science Certification

TO: Connie Sutton
General Science Coordinator

FROM: Undergraduate Curriculum Committee
of the Physics Department:
(Richard Roberts, V. Wijekumar, Ken Hershman)
RR *V. W* *KEH*

In response to your request for suggestion on how you might fulfill the NCATE standard of 16 credit hours in the "Physics Track", we suggest the following:

the addition of PY 350 "Intermediate Experimental Physics", 3 credits.

This is a natural extension of your present coursework, and is appropriate coursework for your students in our opinion. We understand that it only provides 15 credit hours in the physics track but we feel that your students are not prepared to take any other higher level physics courses without more math preparation than is presently required by the General Science curriculum.

If you have any questions or would like to discuss this suggestion further, feel free to call: 4591.

cc: Dennis Whitson

new

PART II #2A.

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Major Requirements:	36*	39-40*
Other Requirements:	0	0
Free Electives:	2-3	0
Total:	124	124-126
*Required Major Courses:	24	24
Controlled Major Electives: One Track	12	15-16

Biology: $5 \quad 5 \quad 3 \quad 1 \quad 3 = 12$

Old Track: BI 110 or 120, 272, 480, BI elective = 12

New Track: BI 110, 120, 272, BI elective = 16

$5 \quad 5 \quad 3 \quad 3 = 16$

Chemistry:

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GS 101 Earth Science (GO) 3sh

GS 102 Earth Science (GO) Lab 1sh

GS 103 Earth Science (MA) 3sh

GS 104 Earth Science (MA) Lab 1sh

PY 111 Physics I Lecture 3sh

PY 112 Physics II Lecture 3sh

PY 121 Physics I Lab 1sh

PY 122 Physics II Lab 1sh

Controlled Electives: 15-16sh
Biology Track: BI 110, 120 272, BI elective
Chemistry Track: CH 231, 321, 351, 232 or 340 or 341
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Other Requirements: 0

Free Electives: 0

Total Degree Requirements: 124-126

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(1) Note: If Physics track is elected, MA 123 and MA 124 are required.