

12-146

LSC Use Only Proposal No:   
 LSC Action-Date: App-4/19/12   
 UWUCC Use Only Proposal No: 11-876   
 UWUCC Action-Date: AP-10/23/12 Senate Action Date: App-11/6/12

Curriculum Proposal Cover Sheet - University-Wide Undergraduate Curriculum Committee

Contact Person(s) <b>Dr. Susie Fello</b>	Email Address <b>sfello@iup.edu</b>
Proposing Department/Unit <b>Professional Studies in Ed.</b>	Phone <b>7-2047</b>

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

**1. Course Proposals (check all that apply)**

New Course                       Course Prefix Change                       Course Deletion  
 Course Revision                       Course Number and/or Title Change                       Catalog Description Change

Current course prefix, number and full title: \_\_\_\_\_

Proposed course prefix, number and full title, if changing: \_\_\_\_\_

**2. Liberal Studies Course Designations, as appropriate**  
This course is also proposed as a Liberal Studies Course (please mark the appropriate categories below)

Learning Skills     Knowledge Area     Global and Multicultural Awareness     Writing Across the Curriculum (W Course)  
 Liberal Studies Elective (please mark the designation(s) that applies – must meet at least one)

Global Citizenship                       Information Literacy                       Oral Communication  
 Quantitative Reasoning                       Scientific Literacy                       Technological Literacy

**3. Other Designations, as appropriate**

Honors College Course                       Other: (e.g. Women's Studies, Pan African)

**4. Program Proposals**

Catalog Description Change                       Program Revision                       Program Title Change                       New Track  
 New Degree Program                       New Minor Program                       Liberal Studies Requirement Changes                       Other

Current program name: BSED Middle Level Program - Science Specialization

Proposed program name, if changing: \_\_\_\_\_

5. Approvals	Signature	Date
Department Curriculum Committee Chair(s)	<i>May Anne Hamel</i>	12-11-11
Department Chairperson(s)	<i>Sue A. Reij</i>	12-12-11
College Curriculum Committee Chair	<i>Edeq B. Kelly TECC Curran</i>	1/23/12
College Dean	<i>A. Beale</i>	1/25/12
Director of Liberal Studies (as needed)	<i>J. H. ...</i>	4/16/12
Director of Honors College (as needed)		
Provost (as needed)	<i>Geord W. Liberman</i>	4/18/12
Additional signature (with title) as appropriate		
UWUCC Co-Chairs	<i>Gail S. Schmitt</i>	10/25/12

Received                      Received                      Received  
OCT 17 2012                      APR 16 2012                      JAN 25 2012

Liberal Studies Liberal Studies Liberal Studies

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

### **1. Catalog Description**

The program is designed to prepare pre-service teachers to meet the demands of teaching all academic subjects at the Middle Level in grades 4-8 with a specialization in Science Education.

### **2. Rationale/Justification**

In response to the Pennsylvania Department of Education's guidelines for Teacher Certification, this program, Middle Level Education for Grades 4-8 with Science Specialization, has been designed to foster an understanding of middle level learners and their learning needs, focusing on teaching of science and other academic subjects at this level.

Students enrolled in this program would complete 121 credits as outlined by the Pennsylvania Department of Education. The program has been designed to include 44 credits in Liberal Studies Education. Of these 44 credits, eight are included as part of the specialization in science and nine credits serve as both the social science requirements and the requirement for a non-western cultures course.

The Professional Education Requirements comprise 28 credits which include: EDSP 102 Educational Psychology, EDUC 442 School Law, EDSP 477 Assessment of Student Learning: Design and Interpretation of Educational Measures, COMM 103 Digital Instructional Technology, and EDUC 440 Professional Seminar: Teacher as Leader. EDUC 421 Student Teaching and EDUC 441 Student Teaching, are the field placement components for two unique student teaching experiences, one in grades 6-8 with a science specialization and one in grades 4-6 without a science specialization.

EDUC 242 Pre-Student Teaching I and EDUC 342 Pre-Student Teaching II are two one-credit courses that are required as practicum experiences related to coursework from the Professional Core, and meet the guidelines from PDE to provide students with four unique field placements.

In the Professional Core for Middle Level Education, 28 credits represent coursework in the following areas: MIDL 310 Instructional Theory and Planning and MIDL 315 Adolescent Development/Classroom Management create a foundation for learning the development characteristics of the middle learner and pedagogical strategies. MIDL 221 Literature for the Middle Grades introduces students to various genres and instructional techniques using literature for grades 4-8. Various methodology classes included: MIDL 222 Reading Instruction and Assessment in Grades 4-8, MIDL 425 Language Arts Instruction and Assessment in Grades 4-8, MIDL 311 Social Studies Instruction and Assessment in Grades 4-8, and MIDL 312 Science Instruction and Assessment in Grades 4-8. Four credits of geoscience concepts are required by the

Pennsylvania Department of Education. GEOS 101/102 The Dynamic Earth has been suggested as a course to meet this requirement.

MATH 317 Probability and Statistics is also included as it is required of all Middle Level Education majors, regardless of specialty area. These courses meet the guidelines as outlined by the Pennsylvania Department of Education to prepare pre-service teachers to teach a variety of subjects at the Middle Level. Coursework in EDUC 499 and EDEX 301 include a focus on teaching in a multicultural/ multiethnic, and diverse classroom setting, respectively. All courses in this undergraduate program have instructional hours embedded for working with English Language Learners and students with a myriad of learning disabilities. The number of hours recommended by PDE, 90 ELL and 270 special needs requirements, have been met. These professional core courses have already been approved by the IUP Senate in December 2009.

The Middle Level Science track is composed of 30 credits. As outlined by PDE, middle level teachers in grades 4-8 must show evidence of a strong content background in science: 8 credits are included from Liberal Studies: SCI 105 and BIOL 103. GEOS 101/102 is required as well. Additionally, CHEM 101 comprises the introductory science courses for students. Additional credits for specialization in science are included in 14 content-rich science credits as outlined on the following page. The approved courses in the Professional Core are delivered from the Professional Studies Department. The 14 advanced credits in Science Specialization are being included in the course proposal from the following science departments: Biology, Chemistry, Geoscience, and Physics.

These fourteen credits are: CHEM 102 (4cr), PHYS 151/161 (4cr), Choice of GEOS 150 or 151 (3cr), and BIOL 113, 114, 115, or 119 (3cr). The choices in biology and geosciences would allow Middle Level Education students an opportunity to select courses, as there are no electives in this program of 121 credits.

## Bachelor of Science in Education- Middle Level Program- Science Specialization

**Special Education- 138.75 In-class hours 300.5 Contact hours**

**E.L.L. 56.5 In-class hours 121 Contact Hours**

<b>Liberal Studies:</b> As outlined in Liberal Studies section with the following specifications: <b>Humanities-History:</b> ENGL 121 and HIST 196 <b>Mathematics:</b> MATH 151, MATH 152 (Liberal Studies MATH elective) <b>Natural Science:</b> BIOL 103, SCI 105 <b>Social Science:</b> GEOG 101 or 102 or 104, ECON 101 or 121, PLSC 101 or PLSC 111 <b>Liberal Studies Electives:</b> 3cr as mentioned above- MATH 152			44
<b>College:</b>			28
<b>Pre-professional Education Sequence:</b>			<b>Contact Hours</b>
COMM 103	Digital Instructional Technology	3cr	32 SPED/ 4 ELL
EDSP 102	Educational Psychology	3cr	60 SPED/ 24 ELL
<b>Professional Education Sequence:</b>			
EDEX 301	Education of Students with Disabilities in Inclusive Secondary Settings	2cr	60 SPED/ S ELL
EDSP 477	Assessment of Student Learning: Design and Interpretation of Educational Measures	3cr	36 SPED/ 24 ELL
EDUC 242	Pre-Student Teaching Clinical Experience I	1cr	5 SPED
EDUC 342	Pres-Student Teaching Clinical Experience II	1cr	20 SPED
EDUC 421	Student Teaching-Non-science setting	5cr	30 SPED/10 ELL
EDUC 440	Professional Seminar: Teacher as Leader	2 cr	2 SPED/ 2ELL
EDUC 441	Student Teaching-Science Setting	5cr	30 SPED/10 ELL
EDUC 442	School Law	1cr	8 SPED/8 ELL
EDUC 499	Multicultural/Multiethnic Education	2cr	5 ELL
<b>Major:</b>			28
<b>Required Middle Level Courses:</b>			
GEOS 101/102	The Dynamic Earth	4 cr	
MATH 317	Probability and Statistics	3 cr	
MIDL 221	Literature in the Middle Grades	3cr	6 SPED/9 ELL
MIDL 222	Reading Instruction and Assessment 4-8	3cr	6 SPED/2 ELL
MIDL 311	Social Studies Instruction and Assessment 4-8	3cr	6 SPED/6 ELL
MIDL 312	Science Instruction and Assessment 4-8	3cr	4 SPED/2 ELL
MIDL 310	Instructional Theory and Planning	3cr	6SPED/6 ELL
MIDL 315	Adolescent Development/Classroom Management	3cr	13.5 SPED/9.5 ELL
MIDL 425	Language Arts Instruction and Assessment4-8	3cr	8 SPED/ 4.5 ELL
<b>Science Distribution Requirements:</b>			18
CHEM 101	College Chemistry I	4 cr	
CHEM 102	College Chemistry II	4 cr	
BIOL 113, 114,115 or 119	Genetic, Environmental Biology, Biotic Diversity, or Emerging Diseases	3 cr	
GEOS 150 or 151	Age of Dinosaurs or Geology of National Parks	3 cr	
PHYS 151/161	Medical Physics/Lab	4 cr	
<b>Total Degree Requirements:</b>			121

**Indiana University of Pennsylvania**  
 Department of Professional Studies in Education  
 A Suggested Sequence for Middle Level Education 4-8  
 Science Specialization- 121 credits

Students must successfully complete the prescribed 6 credits in mathematics and English during the first 48 credits (three semesters) to be eligible for the Teacher Certification Program. Semesters 4 and 5 are interchangeable, except for the chemistry courses. They must be taken in order.

**FRESHMAN**

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**Semester 1- 16 credits**

ENGL 101 College Writing	3
COMM 103 Digital Technology	3
BIOL 103 General Biology I	4
MATH 151 Elements of Mathematics I	3
HIST 196 Explorations in US History	3

**Semester 2- 16 credits**

ENGL 121 Humanities Literature	3
PHIL/RLST Philosophy/Religion	3
SCI 105 Physical Science	4
MATH 152 Elements of Mathematics II	3
ARHI 101/MUHI 101/THTR 101/DANC 102	3

**SOPHOMORE**

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**Semester 3- 16 credits**

ECON 101/ 121 Economics	3
GEOS 101/102 Dynamic Earth	4
ENGL 202 Research Writing	3
GEOG 101/102/104	3
EDSP 102 Educational Psychology	3

**Semester 4- 17 credits**

CHEM 101 College Chemistry I	4
EDUC 242 Pre-Student Teaching I	1
MIDL 310 Instructional Theory and Planning	3
MIDL 221 Literature for Middle Grades	3
MATH 317 Probability and Statistics	3
MIDL 222 Reading Instruction and Ass't	3

**JUNIOR**

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**Semester 5- 15 credits**

GEOS Geology of Nat'l Parks /Dinosaurs	3
EDEX 301 Ed. Students with Disabilities	2
HPED 143 Health and Wellness	3
CHEM 102 College Chemistry II	4
PLSC 101 or 111 Political Science	3

**Semester 6- 13 credits**

MIDL 315 Adolescent Devel/Class Management	3
EDUC 499 Multicultural/ Multiethnic Ed.	2
MIDL 311 Social Studies Instruction and Ass't	3
EDUC 442 School Law	1
EDUC 342 Pre-Student Teaching II	1
MIDL 312 Science Instruction and Assessment	3

**SENIOR**

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**Semester 7-16 credits**

PHYS 151/161 Medical Physics	4
EDSP 477 Assessment of Student Learning	3
MIDL 425 Language Arts Instruction and Ass't	3
MATH 413 Methods of Teaching Mathematics	3
BIOL 113/114/115/119	3

**Semester 8- 12 credits**

EDUC 421 Student Teaching- non-science setting	5
EDUC 441 Student Teaching- Science setting	5
EDUC 440 Professional Seminar	2

### **III. Implementation**

1. This proposed new specialty will have no effect on the other Middle Level Education majors who are in the existing program. Each specialty has its own required content and these science courses are not required of any other specialty student in Middle Level Education.

2. The specialty science classes are delivered outside of the Professional Studies in Education Department. There are adequate resources to deliver the Pre-professional and Professional Core classes in the major from our department. The science courses will be delivered from the various science departments: biology, chemistry, geoscience and physics. As the following letters of support illustrate, resources are adequate to offer seats in these content courses. It is anticipated that 25 Middle Level Education majors will enter the major each year; no more than five seats are expected to be needed in each of the courses in the advanced category of the content specialization. i.e. Six students entered IUP this fall as Middle Level Education majors. All of them thus far are mathematics or English/language arts specialists.

3. Resources are adequate.

4. It is anticipated that three or four students might request their area of specialty to be Middle Level Education with a specialty in science. One or two secondary education students might want to switch majors as the specialty becomes more well-known. With four areas of specialty for Middle Level Education majors to select, it is estimated that approximately five of 25 may want to become Middle Level science teachers.

5. It is the Professional Studies in Education's intent to offer this specialty in the fall semester of 2013.

### **IV. Periodic Assessment**

1. As the first group of Middle Level science specialists move through the sequence of courses, on-going communication between the Middle Level Education Coordinator and the various science departments should occur each semester. As Department chairpersons review enrollments and open seats in courses, any issues with Middle Level Education students should be addressed to the Professional Studies in Education chair. It is expected that each student would earn a C or better in each of the science specialty courses.

2. Students meet each semester with their Professional Studies academic advisors to assess their progress in the content courses. Students can provide input as to the science content, its difficulty level, and the ease with which seats were obtained to better streamline the process of scheduling courses.

3. Chairpersons from the various science departments can evaluate Middle Level Education students' needs for seats in courses as the first cohort of science students move through the course sequence. This information would come informally through intra-communications between the chair and faculty. And be forwarded to the Chairperson of Professional Studies and the Middle Level Education Coordinator.

## V. Course Proposals

There are no new courses included for the Middle Level science specialty; all selected science courses already exist.

## VI. Letters of Support:

The following letters of support have been received from the four science departments: chemistry, physics, geosciences, and biology.

### V. Letters of Support

Four letters of support from Chairs in the Chemistry, Geoscience, Biology, and Physics Departments. accompany this proposal packet.

**Subject: Re: Seats in CHEM 101 and 102**

**From:** George R. Long <grlong@iup.edu>

**Date:** 09/30/11 15:18

**To:** Susan E Fello <sfello@iup.edu>

Dear Dr. Fello,

The Chemistry Department will allow three to five Middle Level Education students to enroll in CHEM 101 and 102 each academic year. For the time being, please have the students contact the Chemistry

Dept. secretary to process the necessary over-rides, until we can formally change the requirements for admission to the courses.

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George R. Long, Ph.D.  
Professor and Chair  
Department of Chemistry  
Indiana University of PA  
Indiana, PA 15705  
724.357.2360

**To: Professional Studies in Education**

**From: Devki Talwar**

**Re: proposed science strand for Middle Level Education Grades 4-8**

**Dear PSE Department,**

**Based on a review of the Middle Level Education Grades 4-8 BSED proposal, the Physics Department can support your department's efforts to deliver this program. From our department, students will be taking the following courses: SCI105 and Physics 151/161.**

**Sincerely,**

**Devki Talwar  
Chair, Physics Department**





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

Dr. Steven A. Hovan, Chair  
(724) 357-7662 office  
(724) 357-5700 fax  
email: hovan@iup.edu

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October 25, 2010

To: Dr. Susan Fello, Professional Studies in Education

From: Steve Hovan, Chairperson, Geoscience Dept

RE: proposed revision to Middle Level Education Program (Grades 4-8)

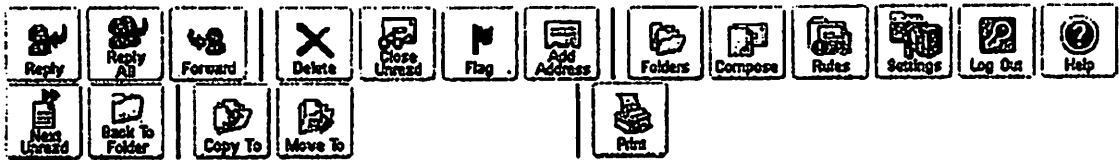
Dear Dr. Fello,

Thank you for the summary and discussion of the proposed revision to the Middle Level Education Program. I've discussed these changes with the faculty in the Dept. Geoscience and we support your efforts to modify this program. We generally offer several hundred seats each semester in GEOS 150 (Geology of National Parks) and GEOS 151 (Age of Dinosaurs) and we feel both of these courses would provide your students with excellent opportunities to learn more about important science topics related to the Geosciences.

Good luck with your proposal. Please let me know if you have any questions or need additional information from us.

Sincerely,

Steve Hovan  
Chair, Geoscience Department

IUP I-Mail:  Message from InBox Folder

To: "Susan E Fello" <sfello@iup.edu>  
 Cc: <luciano@iup.edu>, "Holly Travis" <h.j.travis@iup.edu>

Susan



Thank you for the update and for the inclusion of a wider selection of non-lab Biology options for students. I believe this will be beneficial to our own IUP students in the Middle Level Science program and to the students whom they teach as well.

Please accept this email an indication of my support and please contact me with any further questions.

Thanks, CL.