

LSC Use Only No:	LSC Action-Date:	UWUCC USE Only No.	UWUCC Action-Date:	Senate Action Date:
		09-23a	AP-11/10/09	App-12/1/09

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

Contact Person Drs. Fello and Helterbran	Email Address sfello@iup.edu vhelter@iup.edu
Proposing Department/Unit Professional Studies in Education	Phone 7-2047                      7-2409

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	
<u>Current Course prefix, number and full title</u>	<u>Proposed course prefix, number and full title, if changing</u>
<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 type="checkbox"/> Other <input type="checkbox"/> New Minor Program <input type="checkbox"/> New Track <input type="checkbox"/> Catalog Description Change <input type="checkbox"/> Program Revision	
<u>Current program name</u>	<u>Proposed program name, if changing</u>
	Middle Level Education Grades 4-8 with Mathematics Specialization

4. Approvals		Date
Department Curriculum Committee Chair(s)	<i>Mary Ann Humbel</i>	7-22-09
Department Chair(s)	<i>Jennifer V. Rotigel</i>	7-15-09
College Curriculum Committee Chair	<i>Joseph Domarade TECC</i>	7-22-09
College Dean	<i>May Ann Kapath COSET</i>	7-23-09
Director of Liberal Studies *		
Director of Honors College *		
Provost *	<i>Benedict W. Inteman</i>	10/22/09
Additional signatures as appropriate: (include title)		
UWUCC Co-Chairs	<i>Gail Sedquist</i> 11/30/09	SEP 01 2009

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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 Mathematics Education.

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

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

Students enrolled in this program would complete 123 credits as outlined by the Pennsylvania Department of Education. The program has been designed to include 52 credits in Liberal Studies Education. Of these 52 credits, six are included as part of the specialization in mathematics and 3 credits serve as both a social science requirement and the requirement for a non-western cultures course.

The Professional Education Requirements comprise 19 credits which include: EDSP 102 Educational Psychology, EDUC 441 School Law, COMM 103 Digital Instructional Technology, and EDUC 421 and EDUC 441, the field placement components for two unique student teaching experiences, one in grades 4-8 with a math specialization and one in grades 4-8 without a mathematics specialization. EDUC 242 and EDUC 342 are two one-credit courses that are required as practicum experiences related to coursework from the Professional Core.

In the Professional Core for Middle Level Education, 28 credits represent coursework in the following areas: MIDL 215 Adolescent Development and Classroom Management, MIDL 221 Literature for the Middle Grades, and MIDL 112 Instructional Theory and Planning as a pedagogy course. 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 Science Instruction and Assessment in Grades 4-8. 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, i.e. 90 ELL and 270 special needs requirements, have been met.

The Middle Level Mathematics 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 mathematics: 6 credits are included from Liberal Studies, MATH 151 and MATH 152, and 6 other credits comprise the introductory mathematics courses for students, MATH 153 and MATH 317. Additional credits for specialization in mathematics are included in 18 content-rich mathematics credits as outlined on the following page. The newly-developed courses in the Professional Core are proposed from the Professional Studies Department. The 30 credits in Mathematics Specialization are being included in the course proposal from the Mathematics Department.

Since a strong collegial relationship has existed between Professional Studies in Education and the Mathematics Department through our former K-6 Elementary Education Program, this symbiotic relationship will continue in the delivery of the newly-designed Middle Level Education for Grades 4-8. A letter of support from the Mathematics Education Department is included in this proposal.

**Bachelor of Science in Education- Middle Level Education 4-8/Mathematics Specialization (\*)**

<b>Liberal Studies:</b> As outlined in Liberal Studies section with the following specifications: <b>Mathematics:</b> MATH 151, 152 <b>Natural Science:</b> BIOL 103, SCI 105, GEOS 101-102 <b>Social Science:</b> ECON 101 or 121, GEOG 102 or 104, PLSC 101 or 111 <b>Liberal Studies Electives:</b> 0cr			<b>52</b>
<b>College:</b>			<b>26</b>
<b>Pre-professional Education Sequence:</b>			
COMM 103	Digital Instructional Technology	3cr	
EDSP 102	Educational Psychology	3cr	
<b>Professional Education Sequence:</b>			
EDEX 301	Education of Students with Disabilities in Inclusive Secondary Settings	2cr	
EDSP 477	Assessment of Student Learning: Design and Interpretation of Educational Measures	3cr	
EDUC 242	Pre-Student Teaching Clinical Experience I	1cr	
EDUC 342	Pre-Student Teaching Clinical Experience II	1cr	
EDUC 421	Student Teaching	5cr	
EDUC 441	Student Teaching	5cr	
EDUC 442	School Law	1cr	
EDUC 499	Multicultural/Multiethnic Education	2cr	
<b>Major:</b>			<b>21</b>
<b>Required Middle Level Courses:</b>			
MIDL 221	Literature in the Middle Grades	3cr	
MIDL 222	Reading Instruction and Assessment	3cr	
MIDL 310	Instructional Theory and Planning	3cr	
MIDL 311	Social Studies Instruction and Assessment	3cr	
MIDL 312	Science Instruction and Assessment	3cr	
MIDL 315	Classroom Management and Adolescent Development	3cr	
MIDL 425	Language Arts Instruction and Assessment	3cr	
<b>Mathematics Distribution Requirements:</b>			<b>24</b>
MATH 153	Elements of Algebra	3cr	
MATH 317	Probability and Statistics for Elementary/Middle Level Teachers	3cr	
MATH 413	Methods of Teaching Mathematics at the Middle Level	3cr	
MATH 420	Patterns and Functions for Elementary/Middle Level Teachers	3cr	
MATH 456	Geometry for Elementary/Middle Level Teachers	3cr	
MATH 458	Logic and Logical Games for Elementary/Middle Level Teachers	3cr	
MATH 471	Algebra for Elementary/Middle Level Teachers	3cr	
One course from : MATH 457, 459, or 461		3cr	
<b>Total Degree Requirements:</b>			<b>123</b>

(\*) See requirements leading to teacher certification, titled "3-Step Process for Teacher Education," in the College of Education and Educational Technology section of this catalog.

## Bachelor of Science in Education- Middle Level Education 4-8/Mathematics Specialization (\*)

### Middle Level Education-4-8/Mathematics Specialization

**Special Education- 136.75 In-class hours 298.5 Contact hours**

**E.L.L. 54.5 In-class hours 119 Contact Hours**

<b>Liberal Studies:</b> As outlined in Liberal Studies section with the following specifications: <b>Humanities-History:</b> fulfilled by required courses in major <b>Mathematics:</b> MATH 151, MATH 152 (recommended) <b>Natural Science:</b> BIOL 103, SCI 105, GEOS 101-102 (required) <b>Social Science:</b> ECON 101, GEOG 102 or 104, PLSC 101 or 111 <b>Liberal Studies Electives:</b> 0cr			<b>52</b>
<b>College:</b>			<b>26</b>
<b>Pre-professional Education Sequence:</b>			<b>Contact Hours</b>
COMM 103	Digital Instructional Technology	3cr	<b>32 SPED/ 4 ELL</b>
EDSP 102	Educational Psychology	3cr	<b>60 SPED/ 24 ELL</b>
<b>Professional Education Sequence:</b>			
EDEX 301	Education of Students with Disabilities in Inclusive Secondary Settings	2cr	<b>60 SPED/ 8 ELL</b>
EDSP 477	Assessment of Student Learning: Design and Interpretation of Educational Measures	3cr	<b>36 SPED/ 24 ELL</b>
EDUC 242	Pre-Student Teaching Clinical Experience I	1cr	<b>5 SPED</b>
EDUC 342	Pre-Student Teaching Clinical Experience II	1cr	<b>20 SPED</b>
EDUC 421	Student Teaching	5cr	<b>30 SPED/10 ELL</b>
EDUC 441	Student Teaching	5cr	<b>30 SPED/10 ELL</b>
EDUC 442	School Law	1cr	<b>8 SPED/8 ELL</b>
EDUC 499	Teaching in a Multicultural Setting	2cr	<b>5 ELL</b>
<b>Major:</b>			<b>21</b>
<b>Required Middle Level Courses:</b>			
MIDL 221	Literature in the Middle Grades	3cr	<b>6 SPED/9 ELL</b>
MIDL 222	Reading Instruction and Assessment	3cr	<b>6 SPED/2 ELL</b>
MIDL 310	Instructional Theory and Planning	3cr	<b>6 SPED/6 ELL</b>
MIDL 311	Social Studies Instruction and Assessment	3cr	<b>6 SPED/6 ELL</b>
MIDL 312	Science Instruction and Assessment	3cr	<b>4 SPED/2 ELL</b>
MIDL 315	Classroom Management and Adolescent Development	3cr	<b>13.5 SPED/9.5 ELL</b>
MIDL 425	Language Arts Instruction and Assessment	3cr	<b>8 SPED/ 4.5 ELL</b>
<b>Mathematics Distribution Requirements:</b>			<b>24</b>
MATH 153	Elements of Algebra	3cr	
MATH 317	Probability and Statistics for Elementary and Middle School Teachers	3cr	
MATH 413	Methods of Teaching Mathematics in Middle Level	3cr	
MATH 420	Patterns and Functions for Elementary and Middle School Teachers	3cr	
MATH 456	Geometry for Elementary and Middle School Teachers	3cr	
MATH 458	Logic and Logic Games for Elementary and Middle School Teachers	3cr	
MATH 471	Algebra for Elementary/Middle Level Teachers	3cr	
One course from : MATH 457, 459, or 461		3cr	
<b>Total Degree Requirements:</b>			<b>123</b>

(\*) See requirements leading to teacher certification, titled "3-Step Process for Teacher Education," in the College of Education and Educational Technology section of this catalog.

**Indiana University of Pennsylvania**  
**Department of Professional Studies in Education**  
**A Suggested Sequence for**  
**Middle Level Education 4-8/Mathematics Specialization**  
**123 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, as may be some of the math specialization courses, except for MATH 151, MATH 152, and MATH 153.

**FRESHMAN**-----

**Semester 1 - 17 credits**

ENGL 101 College Writing	4
COMM 103 Digital Technology	3
ECON 101 Principle of Economics	3
MATH 151 Elements of Mathematics I	3
BIO 103 General Biology I	4

**Semester 2 - 16 credits**

ENGL 121 Humanities Literature	3
PHIL/RLST Philosophy/Religion	3
SCI 105 Physical Science I	4
MATH 152 Elements of Mathematics II	3
MATH 153 Elements of Algebra	3

**SOPHOMORE**-----

**Semester 3 - 15 credits**

MATH 317 Probability and Statistics	3
ENGL 202 Research Writing	3
EDSP 102 Educational Psychology	3
MATH 458 Logic and Logical Games	3
HIST 195 History of the Modern Era	3

**Semester 4 - 16 credits**

**Professional Sequence I**

MIDL 310 Learning Theory and Planning	3
MIDL 221 Literature for Middle Grades	3
MIDL 222 Reading Instruction & Assessment	3
EDUC 242 Pre-Student Teaching I	1
MATH 456 Geometry	3
HPED 143 Health and Wellness (online or night)	3

**JUNIOR**-----

**Semester 5 - 16 credit**

ENGL 202 Research Writing	3
GEOS 101/102 Dynamic Earth	4
PLSC 101 or 111 Political Science Elective	3
MATH 420 Patterns and Functions	3
ARHI 101/MUHI 101/THTR 101/DANC 102	3
GEOG 102 or 104	3

**Semester 6 - 16 credits**

**Professional Sequence II**

MIDL 315 Class Management/Adolescent Dev	3
EDUC 342 Pre-Student Teaching II	1
MATH 457 Number Theory	3
MIDL 312 Science Instruction & Assessment	3
MIDL 311 Social Studies Instruction & Assessment	3
MIDL 425 Language Arts Instruction & Assessment	3

**SENIOR**-----

**Semester 7-15 credits**

EDEX 301 Educ. of Students w/Disabilities	2
EDUC 442 School Law	1
EDSP 477 Assessment of Student Learning	3
MATH 413 Mathematics Instruction & Assessment	3
MATH 459 Technology in Middle Math or MATH 461 Discrete Mathematics	3
LBST 499 Senior Synthesis	

**Semester 8 - 12 credits**

EDUC 421 Student Teaching- non-mathematics setting	5
EDUC 441 Student Teaching- mathematics setting	5
EDUC 499 Teaching in a Multicultural/ELL Setting (night)	2

## V. Letter of Support

**From:** "Gary Stoudt" <Gary.Stoudt@iup.edu>  
**Subject:** Mathematics Support for Middle School Mathematics Program  
**Date:** Tue, 24 Mar 2009 15:10:43 -0400  
**To:** <sfello@iup.edu>  
**Cc:** 'Francisco Alarcón' <falarcon@iup.edu>, "John Baker" <jdbaker@iup.edu>, <gsstoudt@iup.edu>



Susie,

The Mathematics Department is happy to support the program revision from Professional Studies in Education concerning the Grades 4-8 (Mathematics Specialization) Program. Through extensive conversations we have worked together through curriculum and resource issues and continued the wonderful working relationship we have had with PSE throughout the years.

We appreciate your willingness to collaborate with us on these issues and hope to continue our history of working together.

Currently the Mathematics Department offers six Elementary Education "Mathematics Concentrate" courses per year (three per semester). Under the proposed Middle School Mathematics Certification program, students are required to take six of these concentrate courses, along with two new courses, MATH 153 and MATH 413, during their last five semesters of study (not including the student teaching semester). By offering four concentrate courses per year, along with MATH 153 and MATH 413 once per year, Middle School Certification students can meet their requirements, and so can our current M.Ed. in Elementary and Middle School students. This rotation plan should also ensure adequate enrollment in the concentrate courses. This plan to substitute six concentrate courses per year with four concentrate courses plus the two new courses keeps the resources needed the same as we use now. This rotation plan is flexible enough to change courses if there are low enrollments by shifting courses from one year to the next. This means it is also flexible enough to accommodate the part time mathematics supervision portion of the student teaching experience.

It is anticipated that there would be roughly the same number of Middle School majors than the current number of Math Concentrates at IUP at any given time, enabling us to keep our section numbers the same. If this number should increase significantly, additional resources would be required, but as we all know, resources follow enrollments.

Gary

Gary Stoudt  
Mathematics Department