



INDIANA UNIVERSITY  
KOKOMO

DIVISION OF EDUCATION

**BACHELOR of SCIENCE in SECONDARY EDUCATION**

Early Adolescence and Adolescence Young Adult

Licensure: 5-12

**Mathematics Teaching Major**

Last Name \_\_\_\_\_

First Name \_\_\_\_\_

IU ID # \_\_\_\_\_

IUK Email \_\_\_\_\_

**GENERAL EDUCATION CORE LEVEL REQUIREMENTS**

(44 Credit Hours)

(Must have a minimum total of 44 credit hours and no course can be used twice to satisfy multiple General Education Core Level Requirements. All courses must have a grade of at least C)

<b>COMMUNICATION SKILLS &amp; INFORMATION LITERACY (Minimum of 9 credit hours required)</b>	<b>Course Taken</b>	<b>Credit Hours</b>	<b>Grade</b>
ENG W131 Elementary Composition (3)			
ENG W132 Elementary Composition II (3)			
SPCH S121 Public Speaking (3)			
<b>Total</b>			

<b>QUANTITATIVE LITERACY (Minimum of 6 credit hours required)</b>	<b>Course Taken</b>	<b>Credit Hours</b>	<b>Grade</b>
*EDUC M440 Teaching Problems and Issues Seminar (3)			
<i>One of the following:</i> MATH M118 Finite Mathematics (3) MATH M119 Survey of Calculus (3) MATH M215 Calculus I (5)			
<b>Total</b>			

<b>CRITICAL THINKING (Minimum of 3 credit hours required)</b>	<b>Course Taken</b>	<b>Credit Hours</b>	<b>Grade</b>
<i>One of the following:</i> *EDUC P250 Educational Psychology (3) *EDUC P255 Educational Psychology for Middle and Secondary Teachers (3)			
<b>Total</b>			

<b>CULTURAL DIVERSITY (Minimum of 3 credit hours required)</b>	<b>Course Taken</b>	<b>Credit Hours</b>	<b>Grade</b>
*EDUC M300 Teaching in a Pluralistic Society (3)			
<b>Total</b>			

<b>ETHICS and CIVIC ENGAGEMENT</b>	<b>Course</b>	<b>Credit Hours</b>	<b>Grade</b>
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<b>(Minimum of 3 credit hours required)</b>	<b>Taken</b>		
*EDUC H340 Education and American Culture (3)			
	<b>Total</b>		

<b>SOCIAL AND BEHAVIORAL SCIENCES</b> <b>(Minimum of 6 credit hours required. Select at least one course from each of the following groups)</b>	<b>Course Taken</b>	<b>Credit Hours</b>	<b>Grade</b>
<i>Political Science, History, and Economics</i> HIST H105 American History I (3) HIST H106 American History II (3) HIST H113 History of Western Civ. I (3) HIST H114 History of Western Civ. II (3) POLS Y103 Intro. to American Politics (3) POLS Y217 Intro. to Comparative Policies (3) POLS Y219 Introduction to World Politics (3) ECON E175 Survey of Econ. for Teachers (3) ECON E200 Fundamentals of Economics (3) ECON E201 Intro. to Micro Economics (3) ECON E202 Intro. to Macro Economics (3) COAS E104 when content is appropriate (3)			
<i>Sociology and Psychology</i> SOC S100 Introduction to Sociology (3) SOC S101 Social Problems and Politics (3) PSY P103 General Psychology (3) PSY P216 Lifespan Development (3) COAS E104 when content is appropriate (3)			
	<b>Total</b>		

<b>HUMANITIES AND ARTS</b> <b>(Minimum of 6 credit hours required. Select at least one course from each of the following groups)</b>	<b>Course Taken</b>	<b>Credit Hours</b>	<b>Grade</b>
<i>Literature, Philosophy, and Religion</i> ENG LXXX (3) ENG EXXX (3) PHIL PXXX (3) except P150 Elementary Logic (3) COAS E103 when content is appropriate (3)			
<i>Fine, Performing, and Communication Arts</i> FINA A101 Ancient & Medieval Art (3) FINA A102 Renaissance Thru Modern Art (3) FINA A108 Art of the Western World (3) FINA F100 Fundamental Studio Drawing (3) FINA S200 Drawing 1 (3) MUS M174 Appreciation to Music (3) MUS Z201 History of Rock and Roll Music (3) MUS U320 Women in Music History (3) MUS X001 IU Kokomo Singers (2) MUS X040 Instrumental Ensemble Band (2) MUS X040 Instrumental Ensemble Handbells (1) THTR T120 Acting I (3) HUMA U101 Introduction to Humanities: What happens in Hamlet? (3) HUMA U102 Introduction to Humanities: The Live Performance (3) HUMA U103 Introduction to Creative Arts (3)			

HUMA U305 Art and Music in the 20 <sup>th</sup> Century (3) ENG W203 Creative Writing (3) COAS E103 when content is appropriate (3)			
<b>Total</b>			

<b>PHYSICAL AND LIFE SCIENCES (Minimum of 8 credit hours required. Select from at least two of the following groups, one laboratory experience must be included)</b>	<b>Course Taken</b>	<b>Credit Hours</b>	<b>Grade</b>
<i>Biology</i> BIOL L100 Man and the Biological World (5) BIOL L105 Introduction to Biology (5) BIOL L270 Humans & Microorganisms (3) BIOL L370 Plants, Animals, and Civilization (3) ANAT A215 Basic Human Anatomy (5) PHSL P215 Basic Human Physiology (5) MICR J200 Microbiology and Immunology (3) PLSC B203 Survey of the Plant Kingdom (5) PLSC B364 Summer Flowering Plants (5) COAS E105 when content is appropriate (3)			
<i>Physics</i> PHYS P100 Physics in the Modern World (5) PHYS P201 General Physics I (5) COAS E105 when content is appropriate (3)			
<i>Chemistry</i> CHEM C100 The World of Chemistry (3) and CHEM C120 Lab (2) CHEM C101 Elementary Chemistry I (3) and CHEM C121 Lab (2) CHEM C105 Principles of Chemistry (3) and CHEM C125 Lab (2) CHEM C390 Environmental Science (3) COAS E105 when content is appropriate (3)			
<i>Geology</i> GEOG G107 Physical Systems of the Environment (3) GEOG G315 Environmental Conservation (3) GEOL G100 General Geology (5) GEOL G133 Geology of the United States (3) GEOL G400 Energy: Sources and Needs (3) GEOL T312 Geology of Indiana (3) COAS E105 when content is appropriate (3)			
<b>Total</b>			

*\* Education courses have been approved to satisfy the General Education Core Level Requirements: M440 for Quantitative Literacy; M300 for Cultural Diversity; H340 for Ethics and Civic Engagement; P250 or P255 for Critical Thinking; Q200 for Information Literacy (Q200 credit hours not included in the General Education Credit Count)*

**TEACHING MAJOR REQUIREMENTS  
(44 Credit Hours)**

Teaching major requirements are fulfilled by completing a total of 44 credit hours in Mathematics. (Minimum GPA of 2.5 in teaching major and no grade less than C in the teaching major is required.) Courses completed need to meet all the following principles. Once those principles are met, you may select any other of the listed possible courses in the licensure area to attain the minimum hour requirement for the teaching major.

Principles	Required IU Kokomo Courses	Course Taken	Hours	Grade
Number Systems and Algebra	M303			
	M403			
Geometry and Measurement	T336			
Statistics and Probability	M360			
	M366			
Calculus	M215			
	M216			
	M311			
Discrete Mathematics	M447 or M347			
		<b>Additional Courses</b>	<b>Hours</b>	<b>Grade</b>
		<b>Total</b>		

\*Other possible IU Kokomo courses: Elementary Differential Equations with Applications M313; Elementary Complex Variables with Applications M415; Introduction to Modern Algebra II M404; Introduction to Analysis I-II M413-M414; Mathematical Models and Applications II M448; Numerical Analysis I-II M471-M472; Visual Basic.net C297; C++ or JAVA C309

**PROFESSIONAL EDUCATION REQUIREMENTS**

[36 credit hours (excl. Gen Ed Credit Count); 48 credit hours (incl. Gen Ed Credit Count)]  
(All courses must have minimum grade of C+)

<b>Benchmark 1 and 2: Pre-professional</b>	<b>Course Taken</b>	<b>Credit Hours</b>	<b>Grade</b>
EDUC M101 Introduction to Education (3)			
*EDUC P255 Educational Psychology for Middle and Secondary Teachers (3)			
EDUC K205 Introduction to Exceptional Children (3)			
EDUC W200 Computers in Education (3)			
EDUC Q200 Introduction to Scientific Inquiry (3)			
	<b>Total</b>		

**REQUIREMENTS for ADMISSION to TEACHER EDUCATION PROGRAM  
(on transcript EDUC-M299)**

Submit application for admission to the Teacher Education Program and permission to take courses in Benchmarks 3 – 5.

**Admission to TEP Requirements:**

<b>Passage of PRAXIS I (PPST) (on transcript EDUC-M199)</b>	<b>Minimum Score</b>	<b>Score</b>	<b>Date</b>
Reading	176		
Writing	172		
Mathematics	175		

**Minimum Overall GPA of 2.5**

**Minimum GPA in Teaching Major courses of 2.5 as well as no grade less than a C**

**Completion of at least 55 credit hours of General Education and/or Teaching Major credit hours**

**Completion of Communication Skills and Quantitative Literacy with a grade of C or better**

**Completion of Pre-professional courses with a grade of C+ or better**

**Faculty Approval for Continuation**

<b>Benchmark 3 – 5</b>			
<b>Benchmark 3 (FALL semester)</b>	<b>Course Taken</b>	<b>Credit Hours</b>	<b>Grade</b>
EDUC M312 General Methods Jr/High Middle (3)			
*EDUC M300 Teaching in a Pluralistic Society (3)			
<b>Benchmark 4 (SPRING semester)</b>	<b>Course Taken</b>	<b>Credit Hours</b>	<b>Grade</b>
EDUC M457 Methods of Teaching SH/JH/MD Mathematics (3)			
EDUC S487 Principles of Senior High/Junior High/Middle School Education (3)			
<b>Benchmark 5 (FALL semester)</b>	<b>Course Taken</b>	<b>Credit Hours</b>	<b>Grade</b>
EDUC M464 Methods of Teaching Reading (3)			
*EDUC H340 Education and American Culture (3)			
	<b>Total</b>		

**Admission to Benchmark 6 Requirements**

<b>Passage of PRAXIS II Teaching Major Areas</b>	<b>Score</b>	<b>Date</b>

<b>Benchmark 6 (SPRING semester)</b>	<b>Course Taken</b>	<b>Credit Hours</b>	<b>Grade</b>
EDUC M480 Student Teaching Secondary (12)			
*EDUC M440 Teaching Problems and Issues Seminar (3)			
	<b>Total</b>		

*\*Credit hours for P255, M300, H340, and M440 are applied to the General Education Credit Count*

NOTE: At the completion of each Benchmark, faculty review and approval are required as conditions for program continuation.

# Mathematics Course Credit Count

<b>General Education (44 credit hours)</b>	
Course Credit Options	Sample Schedule
<p style="text-align: center;"><b>COMMUNICATION SKILLS &amp; INFORMATION LITERACY</b> (Minimum of 9 credit hours required)</p> <p>ENG W131 Elementary Composition (3) ENG W132 Elementary Composition II (3) SPCH S121 Public Speaking (3)</p>	<p>ENG W131 Elementary Composition (3) ENG W132 Elementary Composition II (3) SPCH S121 Public Speaking (3)</p>
<b>Cumulative Total</b>	<b>9</b>
<p style="text-align: center;"><b>QUANTITATIVE LITERACY</b> (Minimum of 6 credit hours required)</p> <p>EDUC M440 Teaching Problems and Issues Seminar (3) One of the following: MATH M118 Finite Mathematics (3) MATH M119 Survey of Calculus (3) MATH M215 Calculus I (5)</p>	<p>MATH M118 Finite Mathematics (3) EDUC M440 Teaching Problems and Issues Seminar (3)</p>
<b>Cumulative Total</b>	<b>15</b>
<p style="text-align: center;"><b>CRITICAL THINKING</b> (Minimum of 3 credit hours required)</p> <p>EDUC P250 Educational Psychology (3) EDUC P255 Educational Psychology for Middle and Secondary Teachers</p>	<p>EDUC P255 Educational Psychology for Middle and Secondary Teachers</p>
<b>Cumulative Total</b>	<b>18</b>
<p style="text-align: center;"><b>CULTURAL DIVERSITY</b> (Minimum of 3 credit hours required)</p> <p>EDUC M300 Teaching in a Pluralistic Society (3)</p>	<p>EDUC M300 Teaching in a Pluralistic Society (3)</p>
<b>Cumulative Total</b>	<b>21</b>
<p style="text-align: center;"><b>ETHICS and CIVIC ENGAGEMENT</b> (Minimum of 3 credit hours required)</p> <p>EDUC H340 Education and American Culture (3)</p>	<p>EDUC H340 Education and American Culture (3)</p>
<b>Cumulative Total</b>	<b>24</b>
<p style="text-align: center;"><b>SOCIAL AND BEHAVIORAL SCIENCES</b> (Minimum of 6 credit hours required. Select at least one course from each of the following groups)</p> <p><i>Political Science, History, and Economics</i> HIST H105 American History I (3)</p>	<p>SOC S100 Introduction to Sociology (3) COAS E104 (<i>Political Science, History, and Economics</i>) (3)</p>

<p>HIST H106 American History II (3)  HIST H113 History of Western Civ. I (3)  HIST H114 History of Western Civ. II (3)  POLS Y103 Intro. to American Politics (3)  POLS Y217 Intro. to Comparative Policies (3)  POLS Y219 Introduction to World Politics (3)  ECON E175 Survey of Econ. for Teachers (3)  ECON E200 Fundamentals of Economics (3)  ECON E201 Intro. to Micro Economics (3)  ECON E202 Intro. to Macro Economics (3)  COAS E104 when content is appropriate (3)</p> <p><i>Sociology and Psychology</i>  SOC S100 Introduction to Sociology (3)  SOC S101 Social Problems and Politics (3)  PSY P103 General Psychology (3)  PSY P216 Lifespan Development (3)  COAS E104 when content is appropriate (3)</p>	
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<b>Cumulative Total</b>	<b>30</b>
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<p style="text-align: center;"><b>HUMANITIES AND ARTS</b>  (Minimum of 6 credit hours required. Select at least one course from each of the following groups)</p> <p><i>Literature, Philosophy, and Religion</i>  ENG LXXX (3)  ENG EXXX (3)  PHIL PXXX (3) except P150 Elementary Logic (3)  COAS E103 when content is appropriate (3)</p> <p><i>Fine, Performing, and Communication Arts</i>  FINA A101 Ancient &amp; Medieval Art (3)  FINA A102 Renaissance Thru Modern Art (3)  FINA A108 Art of the Western World (3)  FINA F100 Fundamental Studio Drawing (3)  FINA S200 Drawing 1 (3)  MUS M174 Appreciation to Music (3)  MUS Z201 History of Rock and Roll Music (3)  MUS U320 Women in Music History (3)  MUS X001 IU Kokomo Singers (2)  MUS X040 Instrumental Ensemble Band (2)  MUS X040 Instrumental Ensemble Handbells (1)  THTR T120 Acting I (3)  HUMA U101 Introduction to Humanities: What happens in Hamlet? (3)  HUMA U102 Introduction to Humanities: The Live Performance (3)  HUMA U103 Introduction to Creative Arts (3)  HUMA U305 Art and Music in the 20<sup>th</sup> Century (3)  ENG W203 Creative Writing (3)  COAS E103 when content is appropriate (3)</p>	<p>ENG L101 Western World Masterpieces (3)  FINA A101 Ancient &amp; Medieval Art (3)</p>
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Cumulative Total	36
<p style="text-align: center;"><b>PHYSICAL AND LIFE SCIENCES</b></p> <p>(Minimum of 8 credit hours required. Select from at least two of the following groups, one laboratory experience must be included)</p> <p><i>Biology</i>  BIOL L100 Man and the Biological World (5)  BIOL L105 Introduction to Biology (5)  BIOL L270 Humans &amp; Microorganisms (3)  BIOL L370 Plants, Animals, and Civilization (3)  MICR J200 Microbiology and Immunology (3)  PLSC B203 Survey of the Plant Kingdom (5)  PLSC B364 Summer Flowering Plants (5)  COAS E105 when content is appropriate (3)</p> <p><i>Physics</i>  PHYS P100 Physics in the Modern World (5)  PHYS P201 General Physics I (5)  COAS E105 when content is appropriate (3)</p> <p><i>Chemistry</i>  CHEM C100 The World of Chemistry (3) and CHEM C120 Lab (2)  CHEM C101 Elementary Chemistry I (3) and CHEM C121 Lab (2)  CHEM C105 Principles of Chemistry (3) and CHEM C125 Lab (2)  CHEM C390 Environmental Science (3)  COAS E105 when content is appropriate (3)</p> <p><i>Geology</i>  GEOG G107 Physical Systems of the Environment (3)  GEOG G315 Environmental Conservation (3)  GEOL G100 General Geology (5)  GEOL G133 Geology of the United States (3)  G400 Energy: Sources and Needs (3)  T312 Geology of Indiana (3)  COAS E105 when content is appropriate (3)</p>	<p>BIOL L100 Man and the Biological World (5)  GEOL G133 Geology of the United States (3)</p>
Cumulative Total	44

## Teaching Major Education: Mathematics (44 credit hours)

Course Credit Options	Sample Schedule
<p><b><i>Number Systems and Algebra</i></b>  MATH M303 Linear Algebra for Undergraduates (3)  MATH M403 Introduction to Modern Algebra I (3)</p> <p><b><i>Geometry and Measurement</i></b>  MATH T336 Topics in Euclidean Geometry (3)</p> <p><b><i>Statistics and Probability</i></b>  MATH M360 Elements of Probability (3)  MATH M366 Elements of Statistical Inference (3)</p> <p><b><i>Calculus</i></b>  MATH M215 Calculus I (5)  MATH M216 Calculus II (5)  MATH M311 Calculus III (3)</p> <p><b><i>Discrete Mathematics</i></b>  MATH M447 Mathematical Models and Applications I (3) or  MATH M347 Discrete Mathematics (3)</p> <p>Teaching Major Electives (variable credit)</p>	MATH M303 Linear Algebra for Undergraduates (3) MATH M403 Introduction to Modern Algebra I (3) MATH T336 Topics in Euclidean Geometry (3) MATH M360 Elements of Probability (3) MATH M366 Elements of Statistical Inference (3) MATH M215 Calculus I (5) MATH M216 Calculus II (5) MATH M311 Calculus III (3) MATH M347 Discrete Mathematics (3) Teaching Major Electives (13)
<b>Cumulative Total</b>	<b>88</b>

## Professional Education

**[36 credit hours (excl. Gen Ed Cr. Count); 48 credit hours (incl. Gen Ed Cr. Count)]**

Course Credit Options	Sample Schedule
<p><b><i>Pre-professional Courses</i></b>  EDUC M101 Introduction to Education (3)  EDUC P255 Educational Psychology for Middle and Secondary Teachers (3)  EDUC K205 Introduction to Exceptional Children (3)  EDUC W200 Computers in Education (3)  EDUC Q200 Introduction to Scientific Inquiry (3)</p>	EDUC M101 Introduction to Education (3) EDUC P255 Educational Psychology for Middle and Secondary Teachers (3)(General Education Credit Count) EDUC K205 Introduction to Exceptional Children (3) EDUC W200 Computers in Education (3) EDUC Q200 Introduction to Scientific Inquiry (3)
<b>Cumulative Total</b>	<b>100</b>
<p><b><i>Teacher Education Program Courses</i></b>  EDUC M312 General Methods Jr/High Middle (3)  EDUC H340 Education and American Culture (3)  EDUC S487 Principles of Senior High/Junior High/Middle School Education (3)  EDUC M300 Teaching in a Pluralistic Society (3)  EDUC M464 Methods of Teaching Reading (3)  EDUC M457 Methods of Teaching SH/JH/MD Mathematics (3)</p>	EDUC M312 General Methods Jr/High Middle (3) EDUC H340 Education and American Culture (3) (General Education Credit Count) EDUC S487 Principles of Senior High/Junior High/Middle School Education (3) EDUC M300 Teaching in a Pluralistic Society (3) (General Education Credit Count) EDUC M464 Methods of Teaching Reading (3) EDUC M457 Methods of Teaching SH/JH/MD Mathematics (3)

Cumulative Total	112
<i>Capstone Courses</i> EDUC M480 Student Teaching Secondary (12) EDUC M440 Teaching Problems and Issues Seminar (3)	EDUC M480 Student Teaching Secondary (12) <i>EDUC M440 Teaching Problems and Issues Seminar (3)</i> <i>(General Education Credit Count)</i>
Cumulative Total	124