

# REQUIREMENTS FOR THE BACHELOR OF SCIENCE

## JEANNINE RAINBOLT COLLEGE OF EDUCATION

### THE UNIVERSITY OF OKLAHOMA

Academic Year
For Students Entering the Oklahoma State System for Higher Education <b>Summer 2023 through Spring 2024</b>

General Requirements
Minimum Total Credit Hours ..... <b>124</b>
Minimum Upper-Division Hours ..... <b>40</b>
<b>Minimum Retention/Graduation Grade Point Averages:</b>
Overall - Combined and OU ..... <b>2.75</b>
Major - Combined and OU ..... <b>2.75</b>

Program
<b>Mathematics Education</b>
<b>B673</b>
Bachelor of Science

OU encourages students to complete at least 31 hours of applicable coursework each year to have the opportunity to graduate in 4 years.

## GENERAL EDUCATION AND COLLEGE REQUIREMENTS

Courses taken to fulfill the University General Education Requirements must be chosen from the approved General Education course list published in the Class Schedule or at <http://www.ou.edu/gened/courses>. The following courses meet minimum University, College, and State General Education Requirements.

### UNIVERSITY-WIDE GENERAL EDUCATION (MINIMUM 40 HOURS) AND COLLEGE REQUIREMENTS

Code	Title	Credit Hours
<b>Core Area I: Symbolic and Oral Communication</b>		
<i>English and Communication (9 hours)</i>		
ENGL 1113	Principles of English Composition (Core I-EN1)	3
ENGL 1213	Principles of English Composition (Core I-EN2)	3
or EXPO 1213	Expository Writing	
COMM 1113	Principles of Communication (Core I)	3
or COMM 2613	Public Speaking	
<i>Language (0-10 hours)</i>		0-10
University-Wide General Education Requirement: Choose two college-level courses in a single language; may be satisfied by successful completion of 2 years in a single language in high school (Core I)		
Oklahoma State Regents for Higher Education Requirement: Teacher candidates must demonstrate conversational skills at a novice-high level in a language other than English OR demonstrate the knowledge and skills necessary to address the needs of Emergent Bilingual (English Learner) students in the P-12 classroom and are proficient in the strategies required for successful delivery of P-12 instruction in that area <sup>1</sup>		
<i>Mathematics (3 hours, met in major)</i>		
MATH 1823	Calculus and Analytic Geometry I (Core I-MATH)	
<b>Core Area II: Natural Science (8-9 hours)</b>		
PHYS 2514	General Physics for Engineering and Science Majors (Core II-NS, met in the major)	
Choose one biological science course from one of the following areas (must include a laboratory component):		4-5
Biology, Microbiology, or Plant Biology (Core II-NSL)		
<b>Core Area III: Social Science (6 hours)</b>		
P SC 1113	American Federal Government (Core III-PSC)	3
Choose one ANTH, PSY, or SOC course (Core III-SS)		3
<b>Core Area IV: Arts and Humanities (18 hours)</b>		
HIST 1483	United States to 1865 (Core IV-HIST)	3
or HIST 1493	United States, 1865 to the Present	
Western Culture: Choose one PHIL course (Core IV-WC)		3
Artistic Forms: Choose one course from the General Education approved course list (IV-AF)		3
World Culture: Choose one course (advisor approved) from the General Education approved course list (Core IV-WDC)		3
HSTM 3013	History of Science to the Age of Newton	3
or HSTM 3023	History of Science Since the Seventeenth Century	
Choose one contemporary world culture course from one of the following areas:		3
American Ethnic Studies, Economics, Foreign Language, Geography, or World Literature		
<b>Core Area V: First Year Experience (3 hours)</b>		
Choose one course (Core V-FYE)		3
<b>Electives (5 hours)</b>		
Choose electives to bring the total to 45 hours		5
<b>Total Credit Hours</b>		<b>45-55</b>

<sup>1</sup>The novice-high level language requirement may be satisfied by classical, modern, Native or American Sign Language. Courses that demonstrate knowledge and skills necessary to address the needs of Emergent Bilingual students are determined by the College of Education.

The 45 hours above, along with EDMA 4243, MATH 1823, MATH 2423 and PHYS 2514 (10 hours) in the Professional and Specialized Education Requirements, comprise the 55 required Liberal Arts hours.

## MAJOR REQUIREMENTS

**Students must maintain a minimum of 2.75 grade point average with no grade less than a C in the Professional Education and the Specialized Education courses for graduation.**

**Certification: To be fully certified, students must pass Certification Examinations for Oklahoma Educators and apply for a license.**

Code	Title	Credit Hours
<b>Professional Education (37 hours)</b>		
EIPT 3473	Learning, Development, and Assessment for Teachers <sup>1</sup>	3
EDSP 3053	Understanding and Accommodating Exceptional Learners	3
EIPT 3043	Learning with Educational Technologies	3
EDS 4003	Schools in American Cultures <sup>1</sup>	3
EIPT 3483	Motivation and Classroom Management for Teachers	3
EDMA 4233	Developing Problem-Solving Environ for Secondary Math Learning	3
EDMA 4243	Fundamental Concepts of Secondary Math Learning (Capstone) <sup>2</sup>	3
EDMA 4253	Teaching and Learning of Mathematics Reasoning and Proof <sup>1</sup>	3
ILAC 4243	Student Teaching Seminar <sup>3</sup>	3
EDUC 4060	Teaching Experiences in the Secondary School <sup>1,3</sup>	10
<b>Specialized Education (42 hours)</b>		
<i>Mathematics</i>		
EDWL 4323	Foundations and Practice for Bi/Multilingual Learners PK-12	3
MATH 1523	Precalculus and Trigonometry	3
MATH 1823	Calculus and Analytic Geometry I <sup>2</sup>	3
MATH 2423	Calculus and Analytic Geometry II <sup>2</sup>	3
MATH 2433	Calculus and Analytic Geometry III	3
MATH 2443	Calculus and Analytic Geometry IV	3
MATH 2513	Discrete Mathematical Structures	3
MATH 3113	Introduction to Ordinary Differential Equations	3
MATH 3333	Linear Algebra I	3
MATH 4753	Applied Statistical Methods	3
<i>Physics</i>		
PHYS 2514	General Physics for Engineering and Science Majors <sup>2</sup>	4
<i>Specialization Electives</i>		
Choose electives from the following list in consultation with advisor (or other advisor approved courses) to bring total to 42 hours:		8
CHEM 1305	Fundamentals of General Chemistry	
CHEM 1315	General Chemistry	
C S 1321	Java for Programmers	
C S 1323	Introduction to Computer Programming for Programmers	
C S 1324	Introduction to Computer Programming for Non-Programmers	
MATH 4323	Introduction to Abstract Algebra I	
MATH 4383	Applied Modern Algebra	
MATH 4673	Graph Theory I	
MATH 4733	Mathematical Theory of Probability	
MATH 4793	Advanced Applied Statistics	
MATH 4803	Topics in Mathematics	
MATH 4853	Introduction to Topology	
<b>Total Credit Hours</b>		<b>79</b>

<sup>1</sup>These courses require field experience.

<sup>2</sup>These 10 hours along with the 45 hours listed in General Education comprise the 55 hour minimum college requirement for General Education.

<sup>3</sup>These courses are taken together in the final semester.

More information in the catalog: (<http://ou-public.courseleaf.com/rainbolt-education/instructional-leadership-academic-curriculum/mathematics-education-bachelor-science/>).

## CERTIFICATION AND DEGREE REQUIREMENTS

**Field Experiences:** Transfer students without appropriate field experiences may be required to enroll in EDUC 2400.

**Pass/No Pass Enrollment:** Only general education electives may be taken under the pass/no pass option.

**Residence Requirements:** Students must complete either the last 30 hours or 45 of the last 60 hours after being fully admitted to a teacher education program to satisfy this requirement.

**Requirements to be Completed to be Eligible for Student Teaching Internship:** Students must be in good standing and have completed **all** baccalaureate degree requirements with the exception of the appropriate internship course itself and the courses taken with it in the final semester per their major requirements.

**Junior College Transfer Students:** Students transferring from a junior college may use the transferred credit to meet certain lower-division course requirements only; that is, freshman and sophomore-level courses.

**Degree Completion Responsibility:** Although the Dean's Office checks each student's records, **the responsibility for meeting degree requirements lies with the student** and not with the advisor or the Dean. Each student should obtain a copy of his or her requirements for graduation and check it regularly as he or she completes his or her degree program.

**Graduation Application:** The final step to be completed by the student before graduation is the filing of an official Application for Graduation. The Application for Graduation should be filled out online by May 1 for fall graduation, December 1 for spring graduation, and March 1 for summer graduation. **The student's degree will not be conferred, nor any completion statement entered on their transcript, until the required application is filed.**

## ADMISSION & RETENTION REQUIREMENTS

It is the responsibility of the student to read and be familiar with the requirements for Admission to, and Retention in, the Jeannine Rainbolt College of Education. The current Admission and Retention policies can be found in the college's overview page in the OU General Catalog, under the Undergraduate tab here: <http://ou-public.courseleaf.com/rainbolt-education/#undergraduatetext>.

## SUGGESTED SEMESTER PLAN OF STUDY

This plan shows *one possible grouping* of courses that would allow students to graduate in four years. Please refer to the front of the degree checklist for official requirements. Students must consult with College of Education academic advisors to verify that courses selected each semester fulfill the recommended plan and satisfy university, College of Education, and major requirements.

Year	FIRST SEMESTER		Hours	SECOND SEMESTER		Hours
FRESHMAN	ENGL 1113	Principles of English Composition ( Core I-EN1 )	3	ENGL 1213 or EXPO 1213	Principles of English Composition ( Core I-EN2 ) or Expository Writing	3
	MATH 1523	Precalculus and Trigonometry ( Core I-MATH )	3	MATH 1823	Calculus and Analytic Geometry I	3
	HIST 1483 or HIST 1493	United States to 1865 ( Core IV-HIST ) or United States, 1865 to the Present	3	P SC 1113	American Federal Government ( Core III-PSC )	3
		First Year Experience (Core V-FYE)	3		ANTH, or PSY, or SOC (Core III-SS)	3
		Biological Sciences, one course in BIOL/MBIO/PBIO (Core II-NSL)	4-5		Arts & Humanities (Core IV-AF)	3
	<b>CREDIT HOURS</b>		<b>16-17</b>	<b>CREDIT HOURS</b>		<b>15</b>
SOPHOMORE	MATH 2423	Calculus and Analytic Geometry II	3	MATH 2433	Calculus and Analytic Geometry III	3
	MATH 3333	Linear Algebra I	3	MATH 2513	Discrete Mathematical Structures	3
	EIPT 3473	Learning, Development, and Assessment for Teachers	3	COMM 1113 or COMM 2613	Principles of Communication ( Core I ) or Public Speaking	3
	PHYS 2514	General Physics for Engineering and Science Majors ( Core II-NS )	4		World Culture (Core IV-WDC, Advisor Approved)	3
		PHIL (Core IV-WC)	3		Specialization Elective	4-5
	<b>CREDIT HOURS</b>		<b>16</b>	<b>CREDIT HOURS</b>		<b>16-17</b>
JUNIOR	EDMA 4233	Developing Problem-Solving Environ for Secondary Math Learning	3	MATH 4753	Applied Statistical Methods	3
	EDSP 3053	Understanding and Accommodating Exceptional Learners	3	HSTM 3013 or HSTM 3023	History of Science to the Age of Newton ( or approved equivalent ) or History of Science Since the Seventeenth Century	3
	MATH 2443	Calculus and Analytic Geometry IV	3	EDMA 4243	Fundamental Concepts of Secondary Math Learning	3
	MATH 3113	Introduction to Ordinary Differential Equations	3	EDS 4003	Schools in American Cultures	3
		Contemporary World Culture, one course	3	EIPT 3043	Learning with Educational Technologies	3
	<b>CREDIT HOURS</b>		<b>15</b>	<b>CREDIT HOURS</b>		<b>15</b>
SENIOR	EDMA 4253	Teaching and Learning of Mathematics Reasoning and Proof	3	EDUC 4060	Teaching Experiences in the Secondary School	10
	EIPT 3483	Motivation and Classroom Management for Teachers	3	ILAC 4243	Student Teaching Seminar	3
	EDWL 4323	Foundations and Practice for Bi/Multilingual Learners PK-12	3			
		Specialization Elective	3			
		General Education Elective	4-5			
	<b>CREDIT HOURS</b>		<b>16-17</b>	<b>CREDIT HOURS</b>		<b>13</b>