

# 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 2024 through Spring 2025</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>Science Education: Physics</b>
<b>B834</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>Communication Skills (9 hours)</i>		
ENGL 1113	Principles of English Composition (Core I-EN1)	3
ENGL 1213 or EXPO 1213	Principles of English Composition (Core I-EN2) Expository Writing	3
COMM 1113 or COMM 2613	Principles of Communication (Core I) Public Speaking	3
<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 (6 hours)</i>		
MATH 1823	Calculus and Analytic Geometry I (or higher, Core I-MATH)	3
MATH 2423	Calculus and Analytic Geometry II (or higher, Core I-MATH)	3
<b>Core Area II: Natural Science (8 hours)</b>		
BIOL 1124	Intro Biol: Molecule/Cell/Phys (Core II-NSL)	4
GEOL 2014	The Earth System (Core II-NSL)	4
<b>Core Area III: Social Science (6 hours)</b>		
P SC 1113	American Federal Government (Core III-PSC)	3
GEOG 3253	Environmental Conservation (Core III-SS)	3
<b>Core Area IV: Arts and Humanities (12 hours)</b>		
HIST 1483 or HIST 1493	United States to 1865 (Core IV-HIST) United States, 1865 to the Present	3
HSTM 3013 or HSTM 3023	History of Science to the Age of Newton (Western Culture, Core IV-WC) History of Science Since the Seventeenth Century	3
Choose one course from Core IV-Artistic Forms (Core IV-AF)		3
Choose one of the following Core IV-World Culture courses (Core IV-WDC):		3
HSTM 3313	Science and Technology in Asian History	
HSTM 3453	Science and Civilization in Islam	
HSTM 3483	Technology, Politics, and International Development	
<b>Core Area V: First Year Experience (3 hours)</b>		
Choose one course (Core V-FYE)		3
<b>Total Credit Hours</b>		<b>44-54</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 44 hours above, along with CHEM 1315, CHEM 1415 and ASTR 1504 or ASTR 1514 (11 hours needed) in the 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 and 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
EDWL 4323	Foundations and Practice for Bi/Multilingual Learners PK-12	3
EDS 4003	Schools in American Cultures <sup>1</sup>	3
EIPT 3483	Motivation and Classroom Management for Teachers	3
EDSC 4513	Teaching Science in Secondary Schools	3
EDSC 4533	Advanced Methods in Science Teaching <sup>1</sup>	3
EDUC 4060	Teaching Experiences in the Secondary School <sup>1,2</sup>	10
ILAC 4243	Student Teaching Seminar <sup>2</sup>	3
<b>Specialized Education (43 hours)</b>		
<i>Biological Science</i>		
Satisfied under Gen Ed		
<i>Chemistry</i>		
CHEM 1315	General Chemistry <sup>3</sup>	5
CHEM 1415	General Chemistry (Continued) <sup>3</sup>	5
<i>Physics</i>		
Choose one of the following tracks:		10
Track 1:		
PHYS 1205 & PHYS 1215	Introductory Physics I for Physics Majors and Introductory Physics II for Physics Majors	
Track 2:		
PHYS 2514 & PHYS 1311	General Physics for Engineering and Science Majors and General Physics Lab I	
PHYS 2524 & PHYS 1321	General Physics for Engineering and Science Majors and General Physics Lab II	
PHYS 2203	Introductory Physics III: Modern Physics	3
<i>Earth &amp; Space Science</i>		
ASTR 1504 or ASTR 1514	Astronomy: Exploring the Universe <sup>3</sup> Astronomy: Exploring the Universe with Laboratory	4
GEOL 1003	Volcanoes and Earthquakes	3
<i>Mathematics</i>		
MATH 2433	Calculus and Analytic Geometry III (or higher)	3
<i>Electives</i>		
Choose 10 hours from the Science electives list		10
<b>Total Credit Hours</b>		<b>80</b>

- <sup>1</sup> These courses require field experience.
- <sup>2</sup> These courses are taken together in the final semester
- <sup>3</sup> These 14 hours along with the 41 hours listed in General Education comprise the 55 hours required for Liberal Arts & Sciences.

More information in the catalog: (<http://ou-public.courseleaf.com/rainbolt-education/instructional-leadership-academic-curriculum/science-education-physics-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 1823	Calculus and Analytic Geometry I ( or higher, Core I-MATH )	3	MATH 2423	Calculus and Analytic Geometry II ( or higher, Core I-MATH )	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
	BIOL 1124	Intro Biol: Molecule/Cell/Phys ( Core II-NSL )	4	GEOL 2014	The Earth System ( Core II-NSL )	4
		First Year Experience (Core V-FYE)	3	GEOL 1003	Volcanoes and Earthquakes	3
	CREDIT HOURS		16	CREDIT HOURS		16
SOPHOMORE	EIPT 3473	Learning, Development, and Assessment for Teachers	3	EDSP 3053	Understanding and Accommodating Exceptional Learners	3
		Artistic Forms (Core IV-Artistic Forms)	3	EDSC 4513	Teaching Science in Secondary Schools	3
	COMM 1113 or COMM 2613	Principles of Communication ( Core I ) or Public Speaking	3	CHEM 1315	General Chemistry	5
		Choose one of the following:	5		Choose one of the following:	5
	PHYS 1205	Introductory Physics I for Physics Majors		PHYS 1215	Introductory Physics II for Physics Majors	
	PHYS 2514 & PHYS 1311	General Physics for Engineering and Science Majors and General Physics Lab I		PHYS 2524 & PHYS 1321	General Physics for Engineering and Science Majors and General Physics Lab II	
	MATH 2443	Calculus and Analytic Geometry IV	3			
	CREDIT HOURS		17	CREDIT HOURS		16
JUNIOR	EDS 4003	Schools in American Cultures	3	EIPT 3043	Learning with Educational Technologies	3
	HSTM 3013 or HSTM 3023	History of Science to the Age of Newton ( Core IV-WC ) or History of Science Since the Seventeenth Century	3	GEOG 3253	Environmental Conservation ( Core III-SS )	3
	ASTR 1504 or ASTR 1514	Astronomy: Exploring the Universe or Astronomy: Exploring the Universe with Laboratory	4		Science Elective	3
	PHYS 2203	Introductory Physics III: Modern Physics	3		Science Elective	3
	CHEM 1415	General Chemistry (Continued)	5		Science Elective	2
	CREDIT HOURS		18	CREDIT HOURS		14
	SENIOR	EDSC 4533	Advanced Methods in Science Teaching	3	EDUC 4060	Teaching Experiences in the Secondary School
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			
		Science Elective	2			
		Choose one of the following (Core IV-WDC):	3			
HSTM 3313		Science and Technology in Asian History				
HSTM 3453		Science and Civilization in Islam				
HSTM 3483		Technology, Politics, and International Development				
CREDIT HOURS		14	CREDIT HOURS		13	

**SCIENCE ELECTIVES**

<b>Code</b>	<b>Title</b>	<b>Credit Hours</b>
ASTR 1523	Life in the Universe	3
ASTR 2513	Introductory Astrophysics	3
ASTR 3103	Stars	3
GIS 2023	Introduction to Spatial Thinking and Computer Mapping	3
GIS 4013	Fundamentals of Geographic Information Systems	3
GIS 4133	Fundamentals of Remote Sensing	3
HSCI - Upper Division and Advisor approval		
MATH 2443	Calculus and Analytic Geometry IV	3
MATH 3333	Linear Algebra I	3
C S 1313	Programming for Non-Majors with C	3
C S 1323	Introduction to Computer Programming for Programmers	3
METR 2013	Introduction to Meteorology I	3
METR 2011	Introduction to Meteorology I Laboratory	1
PHYS 1453	Musical Acoustics	3