

ELEMENTARY EDUCATION COMPREHENSIVE MAJOR: SCIENCE, TECHNOLOGY, ENGINEERING, ARTS, AND MATHEMATICS (STEAM) EMPHASIS

Program Requirements

The Science, Technology, Engineering, Arts, and Mathematics (STEAM) Emphasis requires the Elementary Education Core coursework in addition to 18 credits from the Science, Technology, Engineering, Arts, and Mathematics (STEAM) Emphasis courses listed below.

The Elementary Education Major requires students to complete all requirements of the Licensure Program, including 42 credits of Education (EDUC) coursework. The major also requires students to complete 40 credits of interdisciplinary content coursework.

Code	Title	Credits
Elementary Education/Special Education Core Content:		
BIOL 130	Environmental Biology (GT-SC2)	3
BIOL 135	Environmental Biology Laboratory (GT-SC1)	1
GEOL 101	Physical Geology (GT-SC2)	3
GEOL 105	Physical Geology Laboratory (GT-SC1)	1
MATH 140	College Algebra (GT-MA1)	3
or MATH 113	Statistical Thinking (GT-MA1)	
MATH 221	Foundations of Mathematics for Teaching I	3
MATH 222	Foundations of Mathematics for Teaching II	3
MATH 323	Foundations of Mathematics for Teaching III	3
PHYS 140	Introductory Physics (with laboratory) (GT-SC1)	4
Two of the following:		6
ENG 150	Introduction to Literature (GT-AH2)	
ENG 161	Introduction to Creative Writing (GT-AH1)	
ENG 220	Grammar and the English Language	
ENG 250	Critical Approaches to Literature	
ENG 331	Literature and Ethnicity: Studies in:	
ENG 334	Poetry: Studies in:	
ENG 337	Women Writers	
ENG 352	Children's Literature	
Four of the following (courses must include at least 3 disciplines):		12
ECON 201	Macroeconomics (GT-SS1)	
ECON 202	Microeconomics	
ECON 215	Environmental Economics	
GEOG 120	Introduction to Human Geography (GT-SS2)	
GEOG 250	Geography of North America (GT-SS2)	
GEOG 351	Geography of Latin America and the Caribbean	
HIST 100	Topics in World History (GT-HI1)	
HIST 126	American History through Reconstruction (GT-HI1)	
HIST 127	U.S. History from the Civil War (GT-HI1)	

HIST 128	Introduction to Environmental History (GT-HI1)
HIST 250	History of the Middle East (GT-HI1)
HIST 251	History of Europe (GT-HI1)
HIST 254	History of Africa (GT-HI1)
HIST 257	East Asia, 1500 - present
HIST 260	History of Latin America (GT-HI1)
HIST 327	Colorado History
HIST 349	History of the Hispanic Southwest
POLS 117	Introduction to Political Ideas (GT-SS1)
POLS 180	Introduction to American Politics (GT-SS1)
POLS 250	Politics of the Environment

Total Credits 42

Code **Title** **Credits**
Emphasis in Science, Technology, Engineering, Arts and Mathematics (STEAM)

Select six of the following: 18

ART 119	Foundation Drawing I
ART 171	Foundation Design: Two-Dimensional
ART 172	Foundation Design: Three-Dimensional
BIOL 130	Environmental Biology (GT-SC2)
COM 119	Introduction to Film
COM 121	Introduction to Theatre (GT-AH1)
COM 235	Introduction to Acting
COM 264	Introduction to Media Production I
COM 346	Multimedia Communication
COM 390	Media Production: Documentary
CS 190	Computer Science I
EDUC 492	Independent Study
ENGR 131	Introduction to Engineering Design
MATH 260	Applied Linear Algebra
A 300-level MATH course	
PHYS 110	Introductory Astronomy (GT-SC2)
PHYS 120	Meteorology (GT-SC2)
PHYS 125	Energy and the Environment (GT-SC2)

Total Credits 18

Required Education Coursework

The Elementary Licensure Program requires 42 credits of Education coursework and the Gateway course.

Pre-residency coursework:

Code	Title	Credits
EDUC 000	Education Gateway Course	0
EDUC 102	Learning & Teaching (GT-SS3)	3
EDUC 202	Past, Present, and Future of Schooling in the US (GT-SS3)	3
EDUC 210	Science Teaching Methods	3
EDUC 326	Equity, Diversity, and Social Justice in Education	3
EDUC 340	Application of Pedagogy and Practice	3

4th year Residency Coursework:

Elementary Licensure Coursework to be taken year 4 of Elementary Education Comprehensive Major Program.

Code	Title	Credits
EDUC 400	Foundations for Literacy: Phonology and Linguistics	3
EDUC 402	Reading Comprehension, Vocabulary, and Fluency	3
EDUC 404	Creating Positive Learning Environments	3
EDUC 405	Data-driven Instructional Practices	3
EDUC 408	Teaching Writing with the Brain in Mind	3
EDUC 413	Mathematical Investigations	3
EDUC 428	Teaching English Learners in Elementary Classrooms	3
Six credits of the following:		6
EDUC 458	Elementary Student Teaching	

The residency for Elementary Licensure must be completed in a K-6 classroom, where students are expected to work cooperatively 24 hours per week with qualified mentor teachers. During this year-long clinical residency, students are applying and extending the pedagogical knowledge that they are learning in their Education courses. The Elementary Licensure coursework and the post-licensure coursework are taught online.

Graduation Requirements

Undergraduate programs require a minimum of 120 semester credits for graduation. Of those 120 credits, 40 credits must be in upper-division courses (those marked 300 and above). Fifteen of these 40 upper-division credits must be earned in courses that are part of the standard or comprehensive major program being pursued.

Students are expected to review all graduation requirements, which can be found in the Western Undergraduate Catalog: Graduation Requirements (<https://catalog.western.edu/undergraduate/graduation-requirements/>).

Course	Title	Credits
Year One		
Fall		
BIOL 130	Environmental Biology (GT-SC2)	3
BIOL 135	Environmental Biology Laboratory (GT-SC1)	1
EDUC 000	Education Gateway Course	0
EDUC 102	Learning & Teaching (GT-SS3)	3
ENG 102	Writing and Rhetoric I (GT-CO1)	3
HWTR 100	First Year Seminar	1
MATH 140 or MATH 113	College Algebra (GT-MA1) or Statistical Thinking (GT-MA1)	3
Gen Ed	Social Sciences	3
Credits		17
Spring		
ENG 103	Writing and Rhetoric II (GT-CO2)	3
PHYS 140	Introductory Physics (with laboratory) (GT-SC1)	4
Gen Ed	Arts & Humanities	3
Gen Ed	Social Sciences	3
Gen Ed	Social Sciences	3
Credits		16
Year Two		
Fall		
EDUC 202	Past, Present, and Future of Schooling in the US (GT-SS3)	3
MATH 221	Foundations of Mathematics for Teaching I	3

Elective	ENG Elective	3
Elective	Specialization Elective	3
Gen Ed	Social Sciences	3
Credits		15
Spring		
EDUC 210	Science Teaching Methods	3
GEOL 101	Physical Geology (GT-SC2)	3
GEOL 105	Physical Geology Laboratory (GT-SC1)	1
MATH 222	Foundations of Mathematics for Teaching II	3
Elective	Specialization Elective	3
Gen Ed	Social Sciences	3
Credits		16
Year Three		
Fall		
MATH 323	Foundations of Mathematics for Teaching III	3
Gen Ed	Arts & Humanities	6
Elective	Specialization Elective	6
Credits		15
Spring		
EDUC 326	Equity, Diversity, and Social Justice in Education	3
EDUC 340	Application of Pedagogy and Practice	3
Elective	ENG Elective	3
Elective	Specialization Elective	3
Elective	Specialization Elective (upper division)	3
Credits		15
Year Four		
Fall		
EDUC 400	Foundations for Literacy: Phonology and Linguistics	3
EDUC 404	Creating Positive Learning Environments	3
EDUC 405	Data-driven Instructional Practices	3
EDUC 413	Mathematical Investigations	3
EDUC 458	Elementary Student Teaching	3
Credits		15
Spring		
EDUC 402	Reading Comprehension, Vocabulary, and Fluency	3
EDUC 408	Teaching Writing with the Brain in Mind	3
EDUC 428	Teaching English Learners in Elementary Classrooms	3
EDUC 458	Elementary Student Teaching	3
Credits		12
Total Credits		121