



STEM EDUCATION ADVISING GUIDE

Bachelor of Arts (BA) Physics /Grades 7-12 Physics Licensure

University Core Requirements

Please see your Fulbright adviser for an official degree plan.

ENGLISH COMPOSITION (2 courses • 6 hours)

- ENGL 1013 Composition I
- ENGL 1023 Composition II

U.S. HISTORY (1 course-3 hours)

- HIST 2003 History of the American People to 1877
- HIST 2013 History of the American People 1877 to Present
- PLSC 2003 American National Government

Note: U.S. History & Government courses cannot be used more than once within the University Core.

FINE ARTS (1 course • 3 hours)

- ARCH 1003 Architecture Lecture
- ARHS 1003 Art Lecture
- COMM 1003 Film Lecture
- DANC 1003 Movement and Dance
- LARC 1003 The American Landscape
- MLIT 1003 Music Lecture
- MLIT 1013 Music Lecture for Music Majors
- THTR 1003 Theatre Appreciation
- THTR 1013 Musical Theatre Appreciation

HUMANITIES (1 course • 3 hours)

- AAST 2023 The African American Experience
- ARCH 1013 Diversity and Design
- CLST 1003 Intro to Classical Studies: Greece
- CLST 1013 Intro to Classical Studies: Rome
- COMM 1233 Media, Community, and Citizenship
- ENGL 1213 Intro to Literature
- GNST 2003 Intro to Gender Studies
- HUMN 1124H* Honors Eq. of Cultures, 500-1600
- HUMN 2124H* Honors 20th Century Global Culture
- MUSY 2003 Music in World Cultures
- PHIL 2003 Intro to Philosophy
- PHIL 2103 Intro to Ethics
- PHIL 2203 Logic
- PHIL 3103 Ethics and the Professions
- WLIT 1113 World Literature I
- WLIT 1123 World Literature II
- World language at Intermediate I (2003) level

UNIV 1001: University Perspectives

- (Freshmen must complete during first year; **ARSC 1201 satisfies this requirement and is one entry option into licensure program**)

SOCIAL SCIENCES (3 courses from at least 2 fields • 9 hours)

- AGECE 1103 Principles of Agricultural Microeconomics
- AGECE 2103 Principles of Agricultural Macroeconomics
- ANTH 1023 Intro to Cultural Anthropology
- COMM 1023 Communication in a Diverse World
- ECON 2013 Principles of Macroeconomics
- ECON 2023 Principles of Microeconomics
- ECON 2143 Basic Economics: Theory and Practice
- GEOS 1123 Human Geography
- GEOS 2003 World Regional Geography
- HESC 1403 Life Span Development
- HESC 2413 Family Relations
- HIST 1113 Institutions and Ideas of World Civilizations I
- HIST 1123 Institutions and Ideas of World Civilizations II
- HIST 2003 History of the American People to 1877
- HIST 2013 History of the American People 1877 to Present
- HUMN 1114H* Honors Roots of Culture to 500 C.E.
- HUMN 2114H* Honors Birth of Modern Culture, 1600-1900
- PLSC 2003 American National Government
- PLSC 2013 Intro to Comparative Politics
- PLSC 2203 State and Local Government
- PSYC 2003 General Psychology
- RESM 2853 Leisure and Society
- RSOC 2603 Rural Sociology
- SOCI 2013 General Sociology
- SOCI 2033 Social Problems
- STEM 2003 Art of STEM Communication (one entry option into the STEM Education program)**

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With Mathematics and Computer Science Minor Options

Major Requirements

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MATHEMATICS CORE (2 courses • 6-8 hours)

Select one course from the following three:

- MATH 1203 College Algebra
- MATH 1213 Plane Trigonometry
- MATH 1284 Precalculus Mathematics

Select one course from the following two:

- MATH 2043 Survey of Calculus
- MATH 2554 Calculus I (recommended)

MATH or STAT electives numbered 2000 or higher (2 courses • 6 hours minimum)

- _____
- _____

STEM EDUCATION (24 hours)

- ARSC 1201 Intro to Teaching STEM Subjects and
- ARSC 1212 Field Exp. in Teaching STEM Subjects or
- STEM 2003 Art of STEM Communication
- STEM 2103 Knowing and Learning
- STEM 3203 Classroom Interactions
- PHYS 3273 Inquiry & Modeling in Science Education (counted as PHYS 3000 level electives)
- SEED 4003 Teaching Secondary Science
- STEM 4333 History & Philosophy of Teaching Science
- STEM 4403 Teaching Seminar
- STEM 4506 Teaching Internship

OPTION: MATH MINOR

- MATH 2564 Calculus II
- MATH 2603 Discrete Mathematics
- Or MATH 2803 Transitions to Adv. Math
- Or MATH 4403 Intro. to Partial Diff. Eq
- Or MATH 3583 Foundations to App. Math

3 Courses (9 hours) from the following:

- MATH 2574 Calculus III
- MATH 2584 Elementary Differential Equations
- Any Math 3000+

PHYSICS CORE (4 courses • 13-15 hours)

- PHYS 2013/2011L College Physics I
- PHYS 2033/2031L College Physics II
- PHYS 3603/360VL Intro to Modern Physics
- PHYS 4991 Physics Senior Seminar *

PHYS or ASTR electives numbered 3000 or higher (11 hours minimum)

- _____
- _____
- _____
- PHYS 3273 Inquiry and Modeling in Sci. Ed.

Electives Single Emphasis 3000 level or higher (3 courses • 9 hours). For students seeking teacher licensure, the special emphasis area may involve courses from more than one degree-granting dept. at the UA with approval of their advisor.

- _____
- _____
- _____

OPTION: COMPUTER SCIENCE MINOR

- CSCE 2014 Programming Foundations
- CSCE2004 Programming Foundations II
- CSCE 3193 Programming Paradigms

Three additional CSCE courses 2000 level or higher

- _____
- _____
- _____

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Sample Course Sequence

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Note: This sample course sequence includes a CSCE minor.

FALL SEMESTER		HOURS	SPRING SEMESTERS		HOURS
Freshmen Year					
ARSC 1201	Intro to Teaching STEM Subjects (& U. Pers.)	1	ARSC 1212	Field Exp. in Teaching STEM Sub.	2
PHYS 2013/1L	College Physics I	4	PHYS 2033/1L	College Physics II	4
MATH 1284	PreCalculus	4	MATH 2554	Calculus I (recommended)	3
CSCE 2004	Programming Foundations I	4	CSCE 2014	Programming Foundations II	4
ENGL 1013	Composition I	3	ENGL 1023	Composition II	3
	TOTAL	16		TOTAL	16
Sophomore Year					
STEM 2103	Knowing and Learning	3	STEM 3203	Classroom Interactions	3
PHYS/ASTR	Elective 3000 level or higher	3	PHYS 3603/VL	Intro to Modern Physics	3
MATH/ STAT	Elective 2000+	3	MATH /STAT	Elective 2000+	3
FA/PHIL/HIST/SS	Required Core Electives	3	CSCE	CSCE 2000+ or elec	3
CSCE	CSCE 2000+ or elec	3	FA/PHIL/HIST/SS	Required Core Electives	3
	TOTAL	15		TOTAL	15
Junior Year					
CSCE	CSCE 2000+ or elec	3	FA/PHIL/HIST/SS	Required Core Electives	3
PHYS/ASTR	Elective 3000 level or higher	3	PHYS 3273	Inquiry & Modeling in Sci. Ed.	3
FA/PHIL/HIST/SS	Required Core Electives	3	FA/PHIL/HIST/SS	Required Core Electives	3
FA/PHIL/HIST/SS	Required Core Electives	3	PHYS/ASTR	Elective 3000 level or higher	3
FB Free Elective	3000+ as needed (for 24 hr.)	3	PHYS 4991	Senior Seminar	1
	TOTAL	15	FB Free Elective	3000+ as needed (for 24 hr.)	3
	TOTAL			TOTAL	16
Senior Year					
CSCE 3193	Programming Paradigms (or Elec)	3	STEM 4506	Supervised Teaching Internship	6
SEED 4003	Teaching Secondary Science	3	STEM 4403	Teaching Seminar	3
STEM 4333	History & Philosophy Sci. Teaching	3	Free electives	As needed for 120 hr.	3
Free Elective	3000+ as needed (for 24 hr.)	3			
Free electives	As needed for 120 hr.	3			
	TOTAL	15		TOTAL	12
Total hours for degree: 120					