



ADVISING GUIDE (See Fulbright advisor for an official degree plan)

Bachelor of Arts (B.A.) Mathematics/STEM Education Minor - Mathematics Licensure (grades 7-12)

University Core Requirements

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

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B.A. Mathematics Major Course Requirements

MATH 2574 Calculus III
MATH 2803 Transition to Advanced Mathematics
MATH 3093 Abstract Linear Algebra
MATH 3113 Introduction to Abstract Algebra I
MATH 3513 Elementary Analysis
MATH 4933 Mathematics Major Seminar

CSCE 2004 Programming Foundations I

Choose twelve hours of mathematics electives selected from MATH 2584, CSCE 4133, or MATH and STAT courses numbered at the 3000-level or higher.

Suggestions to support math teaching:

- ❖ [MATH 3133* History of Math](#)
- ❖ [MATH 3773* Foundations of Geometry](#)
- ❖ [MATH 3013* Introduction to Probability](#)
- ❖ [STAT 3003* Statistical Methods](#)

SCIENCE: Choose 2 courses – 8 hours

ANTH 1013/1011L Intro to Biological Anthropology
ASTR 2003/2001L Survey of the Universe
BIOL 1543/1541L Principles of Biology
BIOL 1603/1601L Principles of Zoology
BIOL 1613/1611L Plant Biology
BIOL 2013/2011L General Microbiology
CHEM 1103/1101L University Chemistry I
CHEM 1123/1121L University Chemistry II
GEOS 1113/1111L General Geology
GEOS 1133/1131L Earth Science
PHYS 2054 University Physics I
PHYS 2074 University Physics II

- ❖ _____
- ❖ _____

Course Requirements toward Mathematics Licensure – 24 credit hours

ARSC 1201/1212 Intro to Teaching STEM Subjects/Field Experience
Or... STEM 2003 The Art of STEM Communication

STEM 2103 Knowing and Learning
STEM 3203 Classroom Interactions
CIED 4023 Teaching in Inclusive Secondary Settings
STEM 4506 Supervised Teaching Internship

STEM 4303 Teaching Secondary Mathematics I
or
STEM 4313 Teaching Secondary Mathematics II

MATH 2903 Functions, Foundations, and Models

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Example of an eight-semester Plan

Choice of 2 entry options into the STEM Teacher Education licensure program:

- 1) ARSC 1201/1212 Teaching STEM Subjects/Field Experience
or 2) STEM 2003 Art of STEM Communication

Modify the courses below based on which path you choose

Fall Semesters			Spring Semesters		
<i>Freshman Year</i>					
ARSC 1201 <i>(UNIV 1001)</i>	Intro to Teaching STEM Subjects <i>(fulfills Univ 1001 and is an entry option into the program coupled with ARSC 1212)</i>	1	ARSC 1212	Field Experience in Teaching STEM Subjects <i>(only required by those who choose ARSC 1201/1212 instead of STEM 2003*)</i>	2
MATH 2554	Calculus I	4	MATH 2564	Calculus II	4
ENGL 1013	English Composition I	3	MATH 2803	Transition to Advanced Mathematics	3
	Science (from list)	4	ENGL 1023	English Composition II	3
	Required Core Elective	3		Science (from list)	4
			UNIV 1001	University Perspectives <i>(only take this if not taking ARSC 1201)</i>	1
	TOTAL			TOTAL	
<i>Sophomore Year</i>					
STEM 2103(Fa)	Knowing and Learning	3	STEM 3203 (Sp)	Classroom Interactions	3
MATH 2584	Calculus III	4	MATH 3113	Intro to Abstract Algebra 1	3
MATH 3093	Abstract Linear Algebra	3	STAT 3003*	Statistical Methods <i>(Math Elective)</i>	3
	Required Core Elective	3		Required Core Electives	3
				Required Core Electives	3
	TOTAL			TOTAL	
<i>Junior Year</i>					
STEM 4303* (Fa)	Teaching Secondary Mathematics I <i>(*choose STEM 4303 OR STEM 4313)</i>	3	STEM 4313* (Sp)	Teaching Secondary Mathematics II <i>(*choose STEM 4303 OR STEM 4313)</i>	3
MATH 2903 (Fa-E)	Functions, Foundations, & Models	3	MATH 4933	Mathematics Major Seminar	3
MATH 3513	Elementary Analysis	3	MATH 3133	History of Math <i>(Math Elective)</i>	3
CSCE 2004	Programming Foundations I	4		Required Core Elective	3
	Required Core Elective	3			
	Total			Total	
<i>Senior Year</i>					
<i>**Summer: could opt to take CIED 4023 online in summer session 1 instead of during internship semester</i>					
		3	STEM 4506	Supervised Teaching Internship + weekly seminar; <i>(full time teaching for 16 weeks- begins before univ. semester)</i>	6
MATH 3773	Foundations of Geometry <i>(Math Elective)</i>	3	CIED 4023** <i>(online)</i>	Teaching in Inclusive Sec. Settings <i>(could opt to take during summer)</i>	3
MATH 3013	Intro to Probability <i>(Math Elective)</i>	3			
	TOTAL			TOTAL	

Add electives to reach required total of 120 credit hours for a degree

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Notes:

Students who choose not to complete the licensure program should consider completing the 9 credit hour Certificate in STEM Education or the 15 credit hour Minor in STEM Education.

Recommended for those interested in adding Computer Science Licensure: CATE 4073 Teaching Programming in Secondary Schools and CSCE 2014 Programming Foundations II

Recommended for those interested in coaching sports in secondary schools: Coaching endorsement (24 credit hours)– some courses are online or in the summer. Advisor: Dr. Jack Kern (jkern@uark.edu)

Go to stem.uark.edu for more information about the STEM Education Program for Mathematics, Science, & Computer Science.