



STEM EDUCATION ADVISING GUIDE

Bachelor of Arts (BA) in Chemistry /Grades 7-12 Chemistry 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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Select one Option (A or B) from Below:

Option A (4 courses – 15-15 hrs.)

MATH 2043 Survey of Calculus

-or-

MATH 2554 Calculus I

PHYS 2013/2011L College Physics I/Lab

PHYS 2033/2031L College Physics II

CHEM 3453/3451 Elements of Physical Chemistry

-or-

Option B (5 courses – 22 hours)

MATH 2564 Calculus II

PHYS 2054 University Physics I

PHYS 2074 University Physics II

CHEM 3504 Physical Chemistry I

CHEM 3514/3512L Physical Chemistry II

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

*CHEM 3273 Inquiry & Modeling in Science
Education (counted in CHEM 3000 level electives)

SEED 4003 Teaching Secondary Science

STEM 4333 History & Philosophy of Teaching
Science

STEM 4403 Teaching Seminar

STEM 4506 Teaching Internship

Chemistry Core (5 courses - 20-22 hours)

CHEM 1213/1211L Chemistry for Majors I/Lab

CHEM 1223/1221L Chemistry for Majors II/Lab

-or-

CHEM 1103/1101L University Chemistry I

CHEM 1123/1121L University Chemistry II

CHEM 2263/2261L Analytical Chemistry/Lab

CHEM 3603/3601L Organic Chemistry I/Lab

CHEM 3613/3611L Organic Chemistry II/Lab

-or-

CHEM 3703/3702L Organic Chemistry for Majors I

CHEM 3713/3712L Organic Chemistry for Majors
II

Chemistry Electives 3000 or higher (2 courses – 6 hours)

CHEM elective

CHEM 3273 Inquiry and Modeling

Notes

Chemistry Writing Requirement- Satisfied by formal
research/analytical reports in CHEM 3453/L Physical
Chemistry.

Research Methods (CHEM 3273)- Meets both major and
minor requirements

World Language Requirement-Students who complete
STEM Ed degree plan are exempt from the world
language requirement

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Sample Course Sequence

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Fall Semesters		Hours	Spring Semesters		Hours
<i>Freshman Year</i>					
ARSC 1201	Intro to Teaching STEM Subjects (& U. Pers.)	1	ARSC 1212	Field Exp. in Teaching STEM Sub.	2
CHEM 1103/L	University Chemistry I	4	CHEM 1123/L	University Chemistry II	4
MATH 1203	College Algebra	3	MATH 2043	Survey of Calculus I (or Cal. I)	3
ENGL 1013	Composition I	3	ENGL 1023	Composition II	3
FA/PHIL/HIST/SS	Required Core Elective	3	FA/PHIL/HIST/SS	Required Core Elective	3
	TOTAL	14		TOTAL	15
<i>Sophomore Year</i>					
STEM 2103	Knowing and Learning	3	STEM 3203	Classroom Interactions	3
FA/PHIL/HIST/SS	Required Core Elective	3	PHYS 2033/L	College Physics II (opt. A)	4
CHEM 3603/L	Organic Chemistry I/Lab	4	CHEM 3613/L	Organic Chemistry II/Lab	4
PHYS 2013/L	College Physics I (opt. A)	4	FA/PHIL/HIST/SS	Required Core Elective	3
	TOTAL	14		TOTAL	14
			Introduce Prelicensure Checklist		
<i>Junior Year</i>					
CHEM 2263/L	Analytical Chemistry/Lab	4	BIOL 3273	Inquiry & Modeling in Sci. Ed.	3
CHEM 3813	Introduction to Biochemistry (or other Chem. 3000+ elective)	3	FA/PHIL/HIST/SS	Required Core Elective	3
FA/PHIL/HIST/SS	Required Core Elective	3	Free Elective	General Elective	3
Free Elective	General Elective	3	Free Elective		3
Free Elective	General Elective	3	Free Elective		3
	TOTAL	16		TOTAL	15
			Complete Phase 1 on Prelicensure Checklist		
<i>Senior Year</i>					
SEED 4003	Teaching Secondary Science	3	STEM 4506	Teaching Internship	6
CHEM 3453/L	Elements of Physical Chemistry I (opt. A)	3	STEM 4403	Teaching Seminar	3
STEM 4333	History & Philosophy Sci. Teaching	3	Free Elective	As needed	3
Free Elective		6			
	TOTAL	15		TOTAL	12
Complete Phase 2 on Prelicensure Checklist					
Total hours for degree: 120					

Notes: (a) Biology minor requires an additional 15 hours of biology coursework (see required courses); (b) Physics minor requires 7 additional hours of 3000+ physics coursework.