Last Updated: Aug 3, 2023

CHEMBA-BIOP Degree Snapshot

University Perspectives (0-1 hr)	
UNIV 1001, University Perspectives or exemption	
	General Chemistry (8 hrs)
State Core English Composition (0-6 hrs)	CHEM 1203/1201L, Chemistry for Majors I OR CHEM
ENGL 1013, Composition 1 or exemption	1103/1101L, University Chemistry I
ENGL 1023 , Composition 2 or exemption	CHEM 1223/1221L, Chemistry for Majors II OR CHEM
	1123/1121L, University Chemistry II
State Core US History or Government (3 hrs)	, , ,
US HIST/PLSC	Analytical Chemistry (4 hrs)
	CHEM 2263/2261L, Analytical Chemistry
State Core Mathematics (0 hrs)	
Requirement met with courses in major.	Physical Chemistry (10 hrs)
	CHEM 3504, Physical Chemistry I AND
State Core Natural Sciences w/ labs (0 hrs)	CHEM 3514/3512L, Physical Chemistry II
Requirement met with courses in major.	
	Organic Chemistry (8-10 hrs)
State Core Social Sciences (9 hrs)	CHEM 3703/3702L, Organic Chemistry for Majors I OR
Social Science	CHEM 3603/3601L, Organic Chemistry I
Social Science	CHEM 3713/3712L, Organic Chemistry for Majors II OR
Social Science	CHEM 3613/3611L, Organic Chemistry II
	, , ,
State Core Fine Arts (3 hrs)	Biochemistry (6 hrs)
Fine Art	CHEM 3813, Elements of Biochemistry
Chata Com Housesthing (2 km)	CHEM 4723, Experimental Methods in Organic
State Core Humanities (3 hrs)	Chemistry
Humanities	Or:
Piology (11 hrs)	CHEM 4813H, Honors Biochemistry I OR CHEM 5813,
Biology (11 hrs) BIOL 1543/1541L, Principles of Biology	Biochemistry I
	CHEM 4843H, Honors Biochemistry II OR CHEM 5843,
BIOL 2533/2531L, Cell Biology	Biochemistry II
BIOL 3000+	biochemistry ii
Mathematics (8-15 hrs)	Instrumental Analysis (4 hrs)
MATH 1203, College Algebra (or math placement	CHEM 4213/4211L, Instrumental Analysis
directly in to next math)	
MATH 1284, Precalculus or MATH 1213, Plane	Biomechanical Techniques or Independent Research (3 hrs)
Trigonometry (or math placement directly in to next	CHEM 4853, Biochemical Techniques (Spring only. Co-
math)	or pre-reg: CHEM 3813 or CHEM 4843H)
MATH 2554c, Calculus I (Required)	Or:
MATH 2564c, Calculus II (Required)	CHEM 400V(H) 1 hour CHEM 400V(H) 1 hour
	CHEM 400V(H) 1 hour
Physics (8 hrs)	
PHYS 2054, University Physics I	General Electives (16-42 hrs)
PHYS 2074, University Physics II	(======================================

Graduation Plan

Use the following additional resources, in addition to this major map, to complete your graduation plan (<u>Catalog</u>, and your <u>Degree Audit</u> in UAconnect). Many students have more than one major, minor, or pre-professional goal that has additional required classes. This tool allows you to combine all your educational goals in to one plan.

High School credit	List all Advanced	Placement, International Baccalaureate,	Dual or Concurrent credit	
Year	Fall	Spring	Summer	Total
Year 1				Total 1 st year credit hours (aim for 30):
Year 2				Total 2 nd year credit hours (aim for 60):
Year 3				Total 3 rd year credit hours (aim for 90):
Year 4				Total 4 th year credit hours (Must be at least 120):
Graduation Checklist (does your plan include the following): Do you have at least a 2.0 GPA (this will be something you track each semester) All state minimum core requirements All Major(s)/Minor(s) requirements Writing requirement complete Have At least 50% of each major/minor taken from UofA 24 hours of 3000+ classes exclusively from Fulbright College of Arts and Sciences classes 30 hours of 3000+ classes exclusively from the University of Arkansas. This can include courses taken for the 24-hour rule. 40 hours of upper-level classes. (3000+ or 2000+ with a pre-requisite. Can include transfer credit.) This can include courses taken for the 24-hour and 30-hour rules. 120 total eligible credit hours (see below for a list of ineligible classes)				

COURSES THAT DO NOT COUNT TOWARDS THE 120 HOURS REQUIRED FOR GRADUATION

- ENGL 0002
- MATH 0001L, MATH 0002L, MATH 0003, and MATH 0131L
- Duplicated/Repeated courses (i.e.: if the same course is taken more than once, the hours will only count once for graduation)

Department Information:

Faculty who have exception/substitution authority: Colin Heyes

<u>Transfer Coursework Restriction:</u> At least 50% of a student's Arts and Sciences (ARSC) major or minor must be taken at the University of Arkansas.

<u>Note about course sequencing</u>: The Chemistry majors are pre-requisite heavy programs that are highly sequenced. Some essential classes are offered only once per year. It's highly recommended that students work with advisors to create a multi-semester graduation plan early in their degree.

<u>GPA (Grade Point Average)</u>: Every student must have at least a 2.00 cumulative grade point average to be eligible to graduate from the University of Arkansas.

Please visit https://catalog.uark.edu/undergraduatecatalog for an extensive list of core, major, graduation, and prerequisite requirements. To read more about individual classes, visit the courses of instruction page for course descriptions.

Degree Requirement Breakdown by Category

The following information is designed to help you navigate your experience in your degree and answer common questions that may come up for each requirement.

Category	Degree Requirements	Curriculum Notes
UNIVERSITY		Or equivalent from another University of Arkansas college. (AFLS
PERSPECTIVES	UNIV 1001, University Perspectives	1023H, ARSC 1201, GNEG 1111, HIST 1003(H), HIST 1003(H), PLSC
		1003, BUSI/WCOB 1111)
0-1 hr		
		Note : students who transfer to the University of Arkansas with at
		least 24 credit hours will have this requirement waived.
STATE CORE		See <u>Catalog</u> for information about placement and/or exemption.
COMPOSITION	ENGL 1013, Composition 1 or SAT/ACT exemption	
2.51	ENGL 1023, Composition 2 or SAT/ACT exemption	
0-6 hrs	Choose 1: *	*C
STATE CORE US HISTORY or		*Some courses may appear as options in multiple areas of the
GOVERNMENT	 HIST 2003, History of the American People to 1877 HIST 2013, History of the American People 1877 to 	State Core. You can only count each course 1 time in the State Core
GGVERRANDERT	Present	and will need unique courses in each of the content areas below.
3 hrs	PLSC 2003, American National Government	
STATE CORE	Met with requirements in major.	Based on ACT/SAT or other math placement scores, students may
MATHEMATICS		need to enroll in additional remediation related courses. See
		catalog or math placement website for additional information.
0 hrs		
STATE CORE	Met with requirements in major	
NATURAL	,	
SCIENCES CORE		
9 hrs		
STATE CORE	Choose 3: *	Students must take classes from at least two departments in the
SOCIAL SCIENCES	AGEC 1103, Principles of Agriculture Microeconomics	Social Sciences category.
9 hrs	AGEC 2103, Principles of Agriculture Macroeconomics	
3 1113	ANTH 1023, Intro to Cultural Anthropology	*Some courses may appear as options in multiple areas of the
	COMM 1023, Communication in a Diverse World	State Core. You can only count each course 1 time in the State Core
	ECON 2013, Principles of Macroeconomics	and will need unique courses in each of the content areas below.
	ECON 2023, Principles of Microeconomics	
	ECON 2143, Basic Economics: Theory and Practice	
	EDST 2003, Introduction to Educational Studies	
	GEOS 1123, Human Geography	
	GEOS 2003, World Regional Geography	
	HDFS 1403, Life Span Development	
	HDFS 2413, Family Relations	
	HDFS 2603, Rural Families & Communities	
	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	
	HIST 2093, Animals in World History	
	HUMN 1114H, Honors Roots of Culture to 500 C.E.	
	(Honors only)	
	, , , , , , , , , , , , , , , , , , , ,	
	HUMN 2114H, Honors Birth of Modern Culture, 1600- 1000 (honors only)	
	1900 (honors only)	
	INST/PLSC 2813, Intro to International Relations & Global Control	
	Studies	

	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	
	SOCI 2013, General Sociology	
	SOCI 2033, Social Problems	
	STEM 2003, The Art of STEM Communication	
STATE CORE FINE	Choose 1:	Classes taken in this category may not overlap in any other core
<u>ARTS</u>	ARCH 1003, Architecture Lecture	category
3 hrs	ARHS 1003, Art Lecture	
31113	COMM 1003, Film Lecture	
	DANC 1003, Movement and Dance	
	ENGL 2023, Creative Writing 1	
	HUMN 2114H, Honors Birth of Modern Culture 1600-	
	1900 (honors only)	
	LARC 1003, The American Landscape	
	MLIT 1003, Experiencing Music	
	MLIT 1013, Music and Society (music majors only)	
	MLIT 1333, Popular Music	
	THTR 1003, Theatre Appreciation	
	THTR 1013, Musical Theatre Appreciation	
	THTR 1683, Acting I	
	THTR 1883, Acting 1 for Theatre majors	
STATE CORE	Choose 1: *	*Some courses may appear as options in multiple areas of the
<u>HUMANITIES</u>	AAST 2023, The African American Experience	State Core. You can only count each course 1 time in the State Core
3 hrs	ANTH 1033, Introduction to Archeology	and will need unique courses in each of the content areas below.
	ARCH 1013, Diversity and Design	
	CLST 1003, Introduction to Classical Studies: Greece	
	CLST 1013, Introduction to Classical Studies: Rome	
	COMM 1233, Media, Community and Citizenship	
	DANC 1003, Dance Appreciation	
	DASC 2133, Data Privacy & Ethics	
	ENGL 1213, Introduction to Literature	
	ENGL 2023, Creative Writing I	
	GNST 2003, Introduction to Gender Studies	
	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 1124H*, Honors Equilibrium of Cultures 500-1600	
	(Honors only)	
	HUMN 2213, Introduction to World Religions	
	LALS 2013, Introduction to Latin American and Latino	
	Studies	
	MRST 2013, Introduction to Medieval and Renaissance	
	Studies	
	MUSY 2003, Music in World Cultures	
	PHIL 2003, Introduction to Philosophy	
	PHIL 2103, Introduction to Ethics	
	• PHIL 2203, Logic	
	PHIL 2303, Human Nature and the Meaning of Life	
	PHIL 3103, Ethics and the Professions	

	THTR 1003, Theatre Appreciation	
	THTR 1013, Musical Theatre Appreciation	
	WLIT 1113, World Literature: Beginnings to 1650 CE	
	WLIT 1123, World Literature: 1650 CE to Present	
	Any Intermediate level foreign language numbered at the	
	2000 level	
	 BIOL 1543/1541L, Principles of Biology* 	*BIOL 1584, Biology for majors can automatically count in lieu of
BIOLOGY	 BIOL 2533/2531L, Cell Biology (pre-req: BIOL 1543/1541L 	this.
11 hrs	or BIOL 1584 and recommended CHEM 1123/1121L)	
11 1113	BIOL 3000+ Elective	
MATHEMATICS	MATH 1203, College Algebra (or <u>math placement</u> directly	Students need to earn a C or higher in MATH classes to use
	in to next math)	them as pre-requisites for other classes.
8-15 hrs	MATH 1284, Precalculus or MATH 1213, Plane Triang and the graph of the line MATH 2554)	
	Trigonometry (only required if taking MATH 2554) MATH 2554c, Calculus I (pre-req: MATH 1284c, 1213, or	Students should start on their math sequence as early as
	math placement)*	possible, since many of these classes will be pre-requisites
	MATH 2564c, Calculus II (pre-req: MATH 2554c)	for future CHEM classes.
	, , ,	101 Tuture Cricivi classes.
		December ACT/CAT and the state of the state
		Based on ACT/SAT or other math placement scores,
		students may need to enroll in additional remediation
		related courses. See <u>catalog</u> or <u>math placement</u> website for
		additional information.
		*MATH 2445, Calculus I with review, can also count here.
PHYSICS	PHYS 2054, University Physics I (pre-req: MATH 2554c)	These Physics II will be a pre-requisite to some future CHEM
<u>111131C3</u>	PHYS 2074, University Physics II (pre-req: MATH 2564c)	courses.
8 hrs	FRITS 2074, Oniversity Physics II (pre-req. MATTI 2504c)	courses.
GENERAL	Choose 1 sequence:	Students cannot receive degree credit for both CHEM 1203 and
CHEMISTRY	• CHEM 1203/1201L, Chemistry for Majors I (Fall only. pre-	1103 or CHEM 1223 and CHEM 1123.
0.1	req: MATH 1203 or higher or see course description for	
8 hrs	math placement)	If a student changes to this major after having taken CHEM 1113,
	• CHEM 1223/1221L, Chemistry for Majors II (Spring only. Co-	Chemistry for Engineers I and CHEM 1133/1131L, Chemistry for
	or pre-req: MATH 1284c or higher. Pre-req: CHEM	Engineers II, they can count those courses in this category, with
	1203/1201L or CHEM 1103/1101L)	substitution, if they also take CHEM 1101L or CHEM 1121L.
	• Or	
	• CHEM 1103/1101L, University Chemistry I (pre-req: MATH	
	1203 or see course description for math placement)	
	•	
	CHEM 1123/1121L, University Chemistry II (pre-req: CHEM	
l	1103 and MATH 1203 or see course description for math	
ANAIVTICAL	1103 and MATH 1203 or see <u>course description</u> for math placement)	While not a required co-requisite in the course descriptions
ANALYTICAL CHEMISTRY	1103 and MATH 1203 or see course description for math placement) • CHEM 2263/2261L, Analytical Chemistry (pre-req: CHEM	While not a required co-requisite in the course descriptions,
ANALYTICAL CHEMISTRY	1103 and MATH 1203 or see <u>course description</u> for math placement)	While not a required co-requisite in the course descriptions, chemistry majors should take the lecture and the lab in the same semester.
	 1103 and MATH 1203 or see course description for math placement) CHEM 2263/2261L, Analytical Chemistry (pre-req: CHEM 1123 or 1223 and MATH 1203 or see course description for 	chemistry majors should take the lecture and the lab in the same
CHEMISTRY	 1103 and MATH 1203 or see course description for math placement) CHEM 2263/2261L, Analytical Chemistry (pre-req: CHEM 1123 or 1223 and MATH 1203 or see course description for 	chemistry majors should take the lecture and the lab in the same semester. This class will be a pre-requisite to future physical chemistry
CHEMISTRY 4 hrs	 1103 and MATH 1203 or see course description for math placement) CHEM 2263/2261L, Analytical Chemistry (pre-req: CHEM 1123 or 1223 and MATH 1203 or see course description for math placement) 	chemistry majors should take the lecture and the lab in the same semester. This class will be a pre-requisite to future physical chemistry classes.
CHEMISTRY 4 hrs PHYSICAL	 1103 and MATH 1203 or see course description for math placement) CHEM 2263/2261L, Analytical Chemistry (pre-req: CHEM 1123 or 1223 and MATH 1203 or see course description for math placement) CHEM 3504, Physical Chemistry I (Fall only. Co- or pre-req: 	chemistry majors should take the lecture and the lab in the same semester. This class will be a pre-requisite to future physical chemistry classes. Students cannot receive credit for both Elements of Physical
CHEMISTRY 4 hrs	 1103 and MATH 1203 or see course description for math placement) CHEM 2263/2261L, Analytical Chemistry (pre-req: CHEM 1123 or 1223 and MATH 1203 or see course description for math placement) CHEM 3504, Physical Chemistry I (Fall only. Co- or pre-req: MATH 2564c. Pre-req: CHEM 2263 and PHYS 2074) 	chemistry majors should take the lecture and the lab in the same semester. This class will be a pre-requisite to future physical chemistry classes.
CHEMISTRY 4 hrs PHYSICAL	 1103 and MATH 1203 or see course description for math placement) CHEM 2263/2261L, Analytical Chemistry (pre-req: CHEM 1123 or 1223 and MATH 1203 or see course description for math placement) CHEM 3504, Physical Chemistry I (Fall only. Co- or pre-req: MATH 2564c. Pre-req: CHEM 2263 and PHYS 2074) CHEM 3514/3512L, Physical Chemistry II (Spring only. Pre- 	chemistry majors should take the lecture and the lab in the same semester. This class will be a pre-requisite to future physical chemistry classes. Students cannot receive credit for both Elements of Physical
4 hrs PHYSICAL CHEMISTRY 10 hrs	 1103 and MATH 1203 or see course description for math placement) CHEM 2263/2261L, Analytical Chemistry (pre-req: CHEM 1123 or 1223 and MATH 1203 or see course description for math placement) CHEM 3504, Physical Chemistry I (Fall only. Co- or pre-req: MATH 2564c. Pre-req: CHEM 2263 and PHYS 2074) CHEM 3514/3512L, Physical Chemistry II (Spring only. Pre-req: CHEM 3504) 	chemistry majors should take the lecture and the lab in the same semester. This class will be a pre-requisite to future physical chemistry classes. Students cannot receive credit for both Elements of Physical Chemistry and Physical Chemistry I & 2.
4 hrs PHYSICAL CHEMISTRY	 1103 and MATH 1203 or see course description for math placement) CHEM 2263/2261L, Analytical Chemistry (pre-req: CHEM 1123 or 1223 and MATH 1203 or see course description for math placement) CHEM 3504, Physical Chemistry I (Fall only. Co- or pre-req: MATH 2564c. Pre-req: CHEM 2263 and PHYS 2074) CHEM 3514/3512L, Physical Chemistry II (Spring only. Pre- 	chemistry majors should take the lecture and the lab in the same semester. This class will be a pre-requisite to future physical chemistry classes. Students cannot receive credit for both Elements of Physical

10 hrs	 CHEM 3703/3702L, Organic Chemistry for Majors I (Fall only. Pre-req: CHEM 1123 or 1223) CHEM 3713/3712L, Organic Chemistry for Majors II (Spring only. Pre-req: CHEM 3703) 	
	 Or: CHEM 3603/3601L, Organic Chemistry I (Pre-req: CHEM 1123 or 1223) CHEM 3613/3611L, Organic Chemistry II (Pre-req: CHEM 3603 or 3703) 	
BIOCHEMISTRY	Choose 1 sequence:	Students cannot receive credit for both Elements of
6 hrs	 CHEM 3813, Elements of Biochemistry (Pre-req: CHEM 3613 or 3713) CHEM 4723, Experimental Methods in Organic Chemistry (Fall only. Pre-req: CHEM 3613 or 3713) 	Biochemistry and Honors Biochemistry I & II
	 Or: CHEM 4813H, Honors Biochemistry I (pre-req: honors candidacy and CHEM 3613 or 3713) CHEM 4843H, Honors Biochemistry II (pre-req: honors candidacy and CHEM 4813H) 	
	 Or: CHEM 5813, Biochemistry I (Fall only. Pre-req: instructor consent to enroll in grad class and CHEM 3613 or 3713) CHEM 5843, Biochemistry II (Pre-req: instructor consent to enroll in graduate class and CHEM 5813) 	
INSTRUMENTAL ANALYSIS 4 hrs	Choose 1 option: CHEM 4213/4211L, Instrumental Analysis (Pre-req: CHEM 2263 and CHEM 3613 or 3713)	
BIOCHEMICAL THECHNIQUES OR INDEPENDENT RESEARCH 3 hrs	Choose 1: • CHEM 4853, Biochemical Techniques (Spring only. Co- or pre-req: CHEM 3813 or CHEM 4843H)	Note : Students in the honors program completing CHEM 400VH for this requirement are also required to register for CHEM 4011H in the spring of both Junior and Senior year.
	Or: Completion of a senior thesis based on independent research wherein at least 1 hour of CHEM 400V (or CHEM 400VH) is earned during three different semesters.	
GENERAL ELECTIVES 16-42 hrs	Hours will vary depending on math placement, language placement, choice within chemistry major, and whether a student is exempt from ENGL 1013 and 1023.	Some general electives may need to be upper level to meet college and university residency requirements. See <u>Graduation</u> <u>Checklist</u> on page 2 for more information.
WRITING REQUIREMENT	The college writing requirement may be satisfied in one of two ways: Completion of CHEM 3451L or CHEM 3512L Successful honors thesis defense	

MAJOR MAP FOR BACHELOR OF SCIENCE IN CHEMISTRY CONCENTRATION IN BIOPHYSICAL RS

CHEMISTRY (CHEMBA-BIOP) 2015-16 THROUGH 2023-24 CATALOG YEAR		
HONORS	Minimum Requirements for Honors:	Honors Thesis Timeline: Honors students show check the honors thesis timeline to stay on train honors thesis.
	from the UofA (which includes CHEM 4011H taken once in Junior year and once in Senior year) Complete and defend Honors Thesis	College Honors: Students who also are following Honors Core for Bachelor of Science programs complete those additional requirements: • 2023-24 catalog requirements

See Catalog for full description of requirements.

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- 2023-24 catalog requirements
- 2022-23 and older catalog requirements