DEPARTMENT OF CHEMISTRY & BIOCHEMISTRY
UNIVERSITY OF ARIZONA, COLLEGE OF SCIENCE

B.A. IN CHEMISTRY
CATALOG: FALL 2026 to Present

Name: SID:

General Information: The Bachelor of Arts in Chemistry is designed to expose students to the field of Chemistry. While not required, pairing the BA Chemistry with another STEM major and/or minor is highly recommended to meet the university's degree requirements. Please ask a CBC advisor if you would like suggestions for double majoring.

GENERAL EDUCATION REQUIREMENTS

English Composition

WRIT 101 or 107	3
WRIT 102 or 108	3
Or	
WRIT 109H	3

Second Language

4th Semester Proficiency or higher	4-5

Introduction to General Education

UNIV 101	1

Exploring Perspectives

Artist	3
Humanist	3
Natural Scientist *(fulfilled by CHEM 181 or PHYS 141)*	
Social Scientist	3

Building Connections

Course 1	3
Course 2	3

Civic Institutions

Civics Course	3

General Education Portfolio

UNIV 301	1

FOUNDATIONAL MATH & SCIENCE

Chemistry Major's Colloquia

CHEM 195A (F) – *CBC First-Year Colloquium*	1
CHEM 295A (F) – *CHEM Colloquium 2*	1
CHEM 395A (S) – *CHEM Colloquium 3*	1

Mathematics

MATH 122A & B or MATH 125 – *Calculus*	3-5
MATH 129 – *Calculus 2*	1

Physics *(choose 1)*

PHYS 141 – *Intro Mechanics*	4
PHYS 110 and PHYS 181 – *Intro Physics I*	4

CHEMISTRY MAJOR REQUIREMENTS *(C or higher required)*

General Chemistry

CHEM 181 (F) – *Major's General Chemistry 1*	4
CHEM 182 (S) – *Major's General Chemistry 2*	4

Foundational Coursework

CHEM 246 – *Principles of Organic Chemistry*	3
CHEM 227 – *Principles of Analytical Chemistry*	3
CHEM 310 – *Principles of Inorganic Chemistry*	3
CHEM 385 – *Principles of Physical Chemistry*	3

Foundational Laboratory Coursework

CHEM 256L – *Synthesis Laboratory*	2
CHEM 330L – *Measurements Laboratory*	2

In-depth Coursework *(Choose one)*

BIOC 384 or BIOC 462A (S) – *Biochemistry I*	3-4
BIOC 385 or BIOC 462B (F) – *Biochemistry II*	3-4
BIOC 463A (F, S) – *Biochemical Lab Techniques*	4
CHEM 346 – *Advanced Organic Chemistry*	3
CHEM 356L – *Advanced Organic Synthesis Lab*	3
CHEM 380 (F) – *Mathematical Physics for Chemistry*	3
CHEM 401A (S) – *Instrumental Analysis*	3
CHEM 485 – *Advanced Physical Chemistry*	3
CHEM 400A (F) – *Chemical Measurements Laboratory*	3
CHEM 423A – *Bioanalytical Chemistry*	3
CHEM 400B (S) – *Chemical Measurements Laboratory*	3
CHEM 412 (F) – *Inorganic Preparations*	3
CHEM 418 – *Computational Chemistry*	3
CHEM 450 – *Synthetic & Mechanistic Organic Chem*	3
CHEM 487 – *Intro. to Molecular Spectroscopy*	3

Advanced Electives *(minimum 6 units)*

Please see page 2 for the complete list

GRADUATION REQUIREMENTS

120 Total Units	*42 Upper Division Units*
Cumulative GPA: 2.0+	Major GPA: 2.0+
30 Units @ UA	18 UD Units @ UA

Chemistry Electives List *(6 units minimum)*

ASTR 488A – *Astrochemistry*	3	ENVS 462 – *Environmental Soil & Water Chemistry*	3
ECOL 448A – *Plant Biochemistry & Metabolic Engineering*	3	ENVS 464 – *Environmental Organic Chemistry*	3
BME/OPTI 420 – *Biophotonics*	3	GEOS 400 – *Introduction to Geochemistry*	3
BE/BME 447 – *Sensors & Controls*	3	IMB 401 – *Medical Microbiology & Immunobiology*	3
BME 485 – *Nanoscience & Nanotech for Biomed Engineers*	3	IMB 406 – *Human Immunobiology*	3
CHEE 432 – *Organic Electronic Materials & Devices*	3	MSE 460 – *Materials Science of Polymers*	3
CHEE 437 – *Surface Science*	3	PCOL 410 – *Medicinal Chemistry*	5
CHEM 405A/405B/405C – *Laboratory Safety Series*	1-3	PCOL 350 – *ADME: How the Body Changes Drugs*	3
CHEM 410/510 – *Advanced Inorganic Chemistry*	3	PHYS 426 – *Thermal Physics*	3
CHEM 522 – *Electroanalytical Chemistry*	3	PHYS 431 – *Molecular Biophysics*	3
CHEM 525A – *Mass Spectrometry*	3	PHYS 484 – *Nuclear Magnetic Resonance Spectroscopy*	3
CHEM 526B – *Analytical Molecular Spectroscopy*	3	PTYS 407 – *Chemistry of the Solar System*	3
CHEM 528B – *Advance Analytical Chemistry Laboratory*	3	PTYS 416 – *Asteroids, Comets, & Kuiper Belt Objects*	3
CHEM 427 – *Separations*	3	CHEM 496D – *Chemistry Discover*	1
CHEM 442B – *Polymer Chemistry*	3	CHEM 498(H) – *Senior Capstone/Thesis*	3
CHEM 449A – *Topics in Chemical Biology*	3	CHEM 392/492(H) – *Directed Research*	1-3
ENVS 410 – *Microbial Biogeochemistry & Global Change*	3	CHEM 399/499(H) – *Independent Study*	1-3
ENVS 425 – *Environmental Microbiology*	3	CHEM 391/491(H) – *Preceptorship*	1-3
ENVS 340 – *Environmental Chemistry*	3	CHEM 493 – *Internship*	1-5

Course offerings per semester are subject to change. Please check the Schedule of Classes for most updated course information. Students are responsible for completing any prerequisites or contacting the offering department if permission is required to take the above courses.

Recommended Academic Plan

1st Semester		2nd Semester		3rd Semester		4th Semester	
CHEM 195A	1	CHEM 182	4	CHEM 246	3	CHEM 256L	2
CHEM 181	4	MATH 129	3	CHEM 227	3	CHEM 310	3
MATH 122A & B	5	WRIT 102	3	PHYS 141	4	2nd Language	4-5
UNIV 101	1	Gen ed EP/BC/CI	3	CHEM 295A	1	Gen ed EP/BC/CI	3
WRIT 101	3	Gen ed EP/BC/CI	3	2nd Language	4-5	Gen ed EP/BC/CI	3
Total units	14	**Total units**	16	**Total units**	15-16	**Total units**	15

5th Semester		6th Semester		7th Semester		8th Semester	
CHEM 385	3	CHEM 395A	1	Advanced elective	3	Advanced elective	3
CHEM 330L	2	In-depth CHEM course	3	Gen ed EP/BC/CI	3	Gen ed EP/BC/CI	3
Second Language	4-5	Gen ed EP/BC/CI	3	*Additional Units*	9	UNIV 301	1
Additional Units	6	Second Language	4-5			*Additional Units*	8
		Units to full time	4				
Total units	15-16	**Total units**	15-16	**Total units**	15	**Total units**	15