"W" Number:_____
Student Name:_____
Advisor Name:_____

Catalog: 2021-2022 University of Wyoming Catalog
Program: Chemistry, B.S.

Chemistry, B.S.

The department offers both, B.A. and B.S. degree programs. The B.A. degree includes a minimum of 32 hours of chemistry. The Plan 1 B.S. degree requires at least 38 hours. The Plan 2 B.S. requires 46 hours of chemistry courses. Since the chemistry required in the first two years of all programs is the same, students interested in pursuing a chemistry major can elect any program initially. Discussions with a departmental adviser will allow students to choose the most appropriate major for their career objectives. In general, students planning graduate work in chemistry should elect one of the B.S. programs. The B.A. program has a more liberal content with additional electives. It would support careers in business, law and advanced study in areas needing a strong chemistry background such as toxicology or forensic science.

A B.A. is suitable for students in the College of Education who wish to obtain an A&S degree, and may also be appropriate for some premedical tracks. The Plan 2 (CACS) program is designed to meet standards set by the American Chemical Society (ACS). A student who completes the Plan 2 B.S. program will be certified by the Department of Chemistry to the ACS as having met the specific ACS requirements for undergraduate professional training in chemistry. Students must obtain a grade of C- of higher in each of the chemistry, physics or math courses specifically required for their degree.

Plan 1

(38 hours of chemistry)

Course Requirements

Course Name	Credits:	Term Taken	Grade	Gen Ed
CHEM4930 - Undergraduate Research	Credits: 1-3			
• Additional upper-level chemistry Credits: 3				
MATH2200 - Calculus I	Credits: 4			
MATH2205 - Calculus II	Credits: 4			
MATH2210 - Calculus III	Credits: 4			
• **Additional USP requirements** Credits: 21 • **Additional A&S core requirements** Credits: 6 • **Electives** Credits: 34				

Basic Chemistry: 34 Hours

Course Name	Credits:	Term Taken	Grade	Gen Ed
CHEM1050 - Advanced General Chemistry I **AND**	Credits: 4			
CHEM1060 - Advanced General Chemistry II	Credits: 4			
OR				
CHEM1020 - General Chemistry I **AND**	Credits: 4			
CHEM1030 - General Chemistry II	Credits: 4			
CHEM2230 - Quantitative Analysis	Credits: 5			
CHEM2420 - Organic Chemistry I	Credits: 4			
CHEM2440 - Organic Chemistry II	Credits: 4			
CHEM4000 - Career Skills (1 Hour)	Credits: 1			
CHEM4100 - Inorganic Chemistry Laboratory	Credits: 2			
CHEM4110 - Introductory Inorganic Chemistry	Credits: 3			
CHEM4507 - Physical Chemistry I	Credits: 3			
CHEM4508 - Physical Chemistry II	Credits: 3			
CHEM4525 - Physical Chemistry Lab I	Credits: 1			
CHEM4530 - Physical Chemistry Laboratory II	Credits: 1			

PHYS: 8 Hours

Course Name	Credits:	Term Taken	Grade	Gen Ed
PHYS1310 - College Physics I **AND**	Credits: 4			
PHYS1320 - College Physics II	Credits: 4			
OR				
PHYS1210 - Engineering Physics I **AND**	Credits: 4			
PHYS1220 - Engineering Physics II	Credits: 4			

Minimum Total: 120 Hours

Plan 2 (CACS)

(46 hours of chemistry)

Course Requirements

Course Name	Credits:	Term Taken	Grade	Gen Ed
CHEM4930 - Undergraduate Research	Credits: 1-3			
• Additional upper-division chemistry Credits: 2-3				
MATH2200 - Calculus I	Credits: 4			
MATH2205 - Calculus II	Credits: 4			
MATH2210 - Calculus III	Credits: 4			
• **Additional USP requirements** Credits: 21 • **Additional A & S core requirements** Credits: 6 • **Electives** Credits: 4-6				

Basic Chemistry: 41-42 Hours

Course Name	Credits:	Term Taken	Grade	Gen Ed
CHEM1050 - Advanced General Chemistry I **AND**	Credits: 4			
CHEM1060 - Advanced General Chemistry II	Credits: 4			
OR				
CHEM1020 - General Chemistry I **AND**	Credits: 4			
CHEM1030 - General Chemistry II	Credits: 4			
CHEM2230 - Quantitative Analysis	Credits: 5			
CHEM2420 - Organic Chemistry I	Credits: 4			
CHEM2440 - Organic Chemistry II	Credits: 4			
CHEM4400 - Biological Chemistry	Credits: 3			
OR				
MOLB3610 - Principles of Biochemistry	Credits: 4			
OR				
MOLB4600 - Advanced Biochemistry	Credits: 3			
CHEM4000 - Career Skills (1 Hour)	Credits: 1			
CHEM4100 - Inorganic Chemistry Laboratory	Credits: 2			
CHEM4110 - Introductory Inorganic Chemistry	Credits: 3			
CHEM4230 - Instrumental Methods of Chemical Analysis	Credits: 5			
CHEM4507 - Physical Chemistry I	Credits: 3			
CHEM4508 - Physical Chemistry II	Credits: 3			
CHEM4525 - Physical Chemistry Lab I	Credits: 1			
CHEM4530 - Physical Chemistry Laboratory II	Credits: 1			

PHYS: 8 Hours

Course Name	Credits:	Term Taken	Grade	Gen Ed
PHYS1310 - College Physics I **AND**	Credits: 4			
PHYS1320 - College Physics II	Credits: 4			
OR				
PHYS1210 - Engineering Physics I **AND**	Credits: 4			
PHYS1220 - Engineering Physics II	Credits: 4			

Computer Science: 3 Hours

Course Name	Credits:	Term Taken	Grade	Gen Ed
STAT2050 - Fundamentals of Statistics	Credits: 4			
CHEM4515 - Applied Mathematics in Physical Chemistry I	Credits: 3			
COSC1010 - Introduction to Computer Science I	Credits: 4			

Program Supporting Courses: 18 Hours

A group of courses selected to further the career objectives of the individual student. These are chosen after consultation with the departmental adviser and must subsequently be approved by the departmental Undergraduate Studies Committee. A grade of C- or higher is required for all program supporting courses.

Minimum Total: 120 Hours

Suggested Program for a Bachelor's Degree in Chemistry

(Freshman and Sophomore Years)

Suggested Course Sequence

Freshman Year: Fall

Course Name	Credits:	Term Taken	Grade	Gen Ed
CHEM1050 - Advanced General Chemistry I	Credits: 4			
OR				
CHEM1020 - General Chemistry I	Credits: 4			
ENGL1010 - College Composition and Rhetoric	Credits: 3			
MATH2200 - Calculus I	Credits: 4			
• A&S Core or University Studies Requirements Credits: 3-4				

Total: 14-15 Hours

Freshman Year: Spring

Course Name	Credits:	Term Taken	Grade	Gen Ed
CHEM1060 - Advanced General Chemistry II	Credits: 4			
OR				
CHEM1030 - General Chemistry II	Credits: 4			
MATH2205 - Calculus II	Credits: 4			
• A&S core or University Studies requirements Credits: 6-8				

Total: 14-16 Hours

Sophomore Year: Fall

Course Name	Credits:	Term Taken	Grade	Gen Ed
CHEM2420 - Organic Chemistry I	Credits: 4			
MATH2210 - Calculus III (B.S. requirement)	Credits: 4			
PHYS1310 - College Physics I	Credits: 4			
OR				
PHYS1210 - Engineering Physics I	Credits: 4			
OR				
PHYS1110 - General Physics I	Credits: 4			
• A&S core or University Studies requirements Credits: 3-4				

Total: 15-16 Hours

Sophomore Year: Spring

Course Name	Credits:	Term Taken	Grade	Gen Ed
CHEM2440 - Organic Chemistry II	Credits: 4			
CHEM2230 - Quantitative Analysis	Credits: 5			
PHYS1320 - College Physics II	Credits: 4			
OR				
PHYS1220 - Engineering Physics II	Credits: 4			
OR				
PHYS1120 - General Physics II	Credits: 4			
• A&S core or University Studies requirements Credits: 3-4				

Total: 15-16 Hours

Notes: