

Program for B. S. CHEMISTRY majors entering as Freshmen

	FALL	SPRING	SUMMER
Freshman	CHM 2045/L General Chemistry I/lab MAC 2311 Calculus I	CHM 2046/L General Chemistry II/lab MAC 2312 Calculus II	
Sophomore	CHM 2210/L Organic Chemistry I/lab PHY 2048/L University Physics I/lab	CHM 2211/L Organic Chemistry II/lab PHY 2049/L University Physics II/lab	
Junior	CHM 3410 Physical Chemistry I CHM 3230 Organic Chemistry III CHM 3740L Advanced Lab Techniques CHM 4931 Chemistry Seminar	CHM 3411 Physical Chemistry II CHM 3741L Physical Chemistry lab CHM 3120/L Analytical Chemistry/lab	
Senior	CHM 4130/L Instrumental Analysis/lab Chemistry Elective * Chemistry Elective *	CHM 4611 Inorganic Chemistry CHM 4610L Inorganic Synthesis lab Chemistry Elective *	Total Prerequisite Credits 16 Total Chemistry Credits 55 Upper Division Chemistry 39

*Students must complete 10-11 credit hours of the following courses:

BCH 30334/L Biochemistry I/lab; CHM 4512 Computational Chemistry; CHM 4455/L Polymer Chemistry; CHM 4930 Advanced Topics in Chemistry; CHM 3949 Cooperative Education; CHM 3940 Chemistry Internship; or CHM 4912 Undergraduate Chemistry Research

Undergraduate research is a 2-4 credit course, and a formal written report must be completed by the student in order to fulfill the advanced course requirement. A formal thesis must be written and presented to the department for those students who take this course twice for a total of 6 credits and use this course for both Chemistry electives.

CHM 4912 Undergraduate Chemistry Research; CHM 3949 Cooperative Education; CHM 3940 Chemistry Internship - these chemistry electives have additional requirements in place that must be worked out with your adviser.

Program for B. S. CHEMISTRY/BIOCHEMISTRY majors entering as Freshmen

	FALL	SPRING	SUMMER
Freshman	CHM 2045/L General Chemistry I/lab MAC 2311 Calculus I BOT 2010/L General Botany/lab	CHM 2046/L General Chemistry II/lab MAC 2312 Calculus II ZOO 1010/L General Zoology/lab	
Sophomore	CHM 2210/L Organic Chemistry I/lab PHY 2048/L University Physics I/lab	CHM 2211/L Organic Chemistry II/lab PHY 2049/L University Physics II/lab	
Junior	CHM 3410 Physical Chemistry I CHM 3230 Organic Chemistry III CHM 3740L Advanced Lab Techniques CHM 4931 Chemistry Seminar	CHM 3411 Physical Chemistry II CHM 3741L Physical Chemistry lab CHM 3120/L Analytical Chemistry/lab	
Senior	Chemistry Elective * Chemistry Elective * Chemistry Elective *	CHM 4611 Inorganic Chemistry CHM 4610L Inorganic Synthesis lab Chemistry Elective *	Total Prerequisite Credits 24 Total Chemistry Credits 56 Upper Division Chemistry 36-39 Upper Division Biology 8

*Students must complete two courses from Group A and 6 – 8 credit hours from Group B:

Group A (Two courses): BCH 3033/L Biochemistry I/lab; PCB 3063/L Genetics/lab; MCB 3020/L Microbiology/lab; or PCB 4524/L Molecular Biology/lab; BCH 3034/L Biochemistry II/lab

Group B (6-8 credit hours): CHM 4512 Computational Chemistry; CHM 4455/L Polymer Chemistry; CHM 4130/L Instrumental Analysis; CHM 4930 Advanced Topics in Chemistry; CHM 3949 Cooperative Education; CHM 3940 Chemistry Internship; or CHM 4912 Undergraduate Chemistry Research

CHM 4912 Undergraduate Chemistry Research; CHM 3949 Cooperative Education; CHM 3940 Chemistry Internship - these chemistry electives have additional requirements in place that must be worked out with your adviser.

Program for B.A. CHEMISTRY/BIOCHEMISTRY
Environmental, Forensics, Pre-Medical and Medicinal Chemistry Specializations

	FALL	SPRING	SUMMER
Freshman	CHM 2045/L General Chemistry I/lab MAC 2311 Calculus I BOT 2010/L General Botany/lab	CHM 2046/L General Chemistry II/lab MAC 2312 Calculus II ZOO 1010/L General Zoology/lab	
Sophomore	CHM 2210/L Organic Chemistry I/lab PHY 2048/L University Physics I/lab or PHY 2053/L General Physics I/lab	CHM 2211/L Organic Chemistry II/lab PHY 2049/L University Physics II/lab or PHY 2054/L General Physics II/lab	
Junior	CHM 4931 Chemistry Seminar Chemistry Elective*	CHM 3120/L Analytical Chemistry/lab CHM 3400 Basic Physical Chemistry	
Senior	Chemistry Elective* Chemistry Elective *	CHM 4611 Inorganic Chemistry Chemistry Elective*	Total Prerequisite Credits 32 Total Chemistry Credits 40 Upper Division Chemistry 25 Specialization Credits 15-19 Upper Division Electives 6-9

12 additional credits hours in chemistry are required from the following list.

CHM 3740L - Advanced Lab Techniques; CHM 3230 - Organic Chemistry III; CHM 4512 Computational Chemistry; CHM 4455/L Polymer Chemistry/lab; CHM 4130/L Instrumental Analysis/lab; CHM 4930 Advanced Topics in Chemistry; CHM 3949 Cooperative Education; CHM 3940 Chemistry Internship; CHM 4610L Inorganic Synthesis lab; or CHM 4912 Undergraduate Chemistry Research

CHM 4912 Undergraduate Chemistry Research; CHM 3949 Cooperative Education; CHM 3940 Chemistry Internship - these chemistry electives have additional requirements in place that must be worked out with your adviser.

Specialization Options: Please attached sheet for specific specialization options for the B.A. Program.

Program for B.A. CHEMISTRY
Business, Pre-Law, Education, and Chemical Hygiene Specializations

	FALL	SPRING	SUMMER
Freshman	CHM 2045/L General Chemistry I/lab MAC 2311 Calculus I	CHM 2046/L General Chemistry II/lab MAC 2312 Calculus II	
Sophomore	CHM 2210/L Organic Chemistry I/lab PHY 2048/L University Physics I/lab or PHY 2053/L General Physics I/lab	CHM 2211/L Organic Chemistry II/lab PHY 2049/L University Physics II/lab or PHY 2054/L General Physics II/lab	
Junior	CHM 4931 Chemistry Seminar Chemistry Elective*	CHM 3120/L Analytical Chemistry/lab CHM 3400 Basic Physical Chemistry	
Senior	Chemistry Elective* Chemistry Elective *	CHM 4611 Inorganic Chemistry Chemistry Elective*	Total Prerequisite Credits 28 Total Chemistry Credits 40 Upper Division Chemistry 25 Specialization Credits 15-18 Upper Division Electives 6-9

12 additional credits hours in chemistry are required from the following list.

CHM 3740L - Advanced Lab Techniques; CHM 3230 - Organic Chemistry III; CHM 4512 Computational Chemistry; CHM 4455/L Polymer Chemistry/lab; CHM 4130/L Instrumental Analysis/lab; CHM 4930 Advanced Topics in Chemistry; CHM 3949 Cooperative Education; CHM 3940 Chemistry Internship; CHM 4610L Inorganic Synthesis lab; or CHM 4912 Undergraduate Chemistry Research

CHM 4912 Undergraduate Chemistry Research; CHM 3949 Cooperative Education; CHM 3940 Chemistry Internship - these chemistry electives have additional requirements in place that must be worked out with your adviser.

Specialization Options: Please attached sheet for specific specialization options for the B.A. Program.

BACHELOR OF ARTS SPECIALIZATIONS

B.A. CHEMISTRY

Business Option (18 sh)

GEB 3032 Bus. Fndts. for Non-Bus. Majors

MAR 4403 Sales Management

MAR 4412 Professional Selling Methods

Choose one course from:

STA 2023 Elements of Statistics

STA 3162C Applied Statistics

Choose two courses from:

ACG 3082 Accounting for Non-Majors

ECO 3003 Principles of Economic Theory and Public Policy

MAN 3025 Management Fundamentals

Pre-Law Option (15 sh)

CJL 3510 Judicial Process

PLA 4263 Evidence

PLA 4308 Criminal Procedure

Choose two courses from:

EVR 4035 Environmental Law

PLA 3103 Legal Research and Writing

PLA 4273 Tort Law

PLA 4304 Criminal Law

Education Option (15 sh)

EDF 3234 Applied Foundations of Education

EDG 3323C General Methods for Teaching K-12 Students

ESE 4322 Instr., Manag., and Assess.: Sec. Ed.

ESE 4940 ESOL/Reading Professional Pract. II

SCE 4320 Teaching Science in Middle and Secondary Schools

Chemical Hygiene (18-19)

ETI 3704 Industrial Safety (OSHA)

PHC 4XX1 Fund. of Occup. Health & Safety

PHC 4XXX Fund. of Industrial Hygiene

PHC 4183 Medical Disaster Management

EVR 4035 Environmental Law

One additional adviser-approved elective course

Minor Option

Students must complete an adviser-approved minor or its 15-18 sh equivalent in a field related to the student's career objectives and additional approved 3000/4000 level electives outside chemistry.

B.A. CHEMISTRY/ BIOCHEMISTRY

Environmental Option (19 sh)

GEO 3260/L Geography of Soils/Laboratory

GEO 4280/L Basic Hydrology/Laboratory

GLY 2010/L Physical Geology/laboratory

GLY 3031C Environmental Geology

Choose one course from:

EVR 4035 Environmental Law

EVR 4037 Environmental Auditing(preferred)

Forensic Sciences Option (18 sh)

CCJ 3024 American Criminal Justice System

CCJ 3654 Substance Abuse and the Offender

CCJ 4036 Behavioral Science and the Law

CJE 3670 Introduction to Forensic Sciences

Choose two courses from:

ANT 3520 Forensic Anthropology

CCJ 3014 Criminology

CCJ 4239 Criminal Investigation

PLA 4263 Evidence

PLA 4308 Criminal Procedure

Pre-Medical Option (17-18 sh)

ENC 3250 Professional Writing

PHI 4633 Biomedical Ethics

Choose three courses from:

BCH 3033/L Biochemistry I

MCB 3020/L Microbiology/lab

PCB 3063/L Genetics/Laboratory

PCB 4703 Human Physiology

Medicinal Chemistry Option (19-20)

BCH 3033/L Biochemistry I

PCB 3063/L Genetics/Laboratory

PCB 4233/L Immunology/lab

PCB 4524/L Molecular Biology/Lab

One additional adviser-approved elective course

Minor Option

Students must complete an adviser-approved minor or its 15-18 sh equivalent in a field related to the student's career objectives and additional approved 3000/4000 level electives outside chemistry