

B.S. CHEMISTRY

NAME _____ SID # _____ DATE: _____

CATALOG YEAR 2021-2022

EXPECTED GRADUATION DATE _____

GENERAL EDUCATION REQUIREMENTS**English Composition**

ENGL 101 or 107 3 _____

ENGL 102 or 108 3 _____

Or

ENGL 109H 3 _____

Second Language2nd semester proficiency by credit or exam required.... _____**Individuals and Societies (3 courses)**

Tier One ____ 150 A, B, or C..... 3 _____

Tier One ____ 150 A, B, or C..... 3 _____

Tier Two Individuals & Societies course 3 _____

Traditions and Cultures / Humanities (3 courses)

Tier One ____ 160 A, B, C, or D 3 _____

Tier One ____ 160 A, B, C, or D 3 _____

Tier Two Humanities course 3 _____

Tier Two Arts (3 units total)

_____ 3 _____

Natural Sciences (NATS) - Satisfied by CBC major course work.**Diversity Emphasis Course****(Gender/Race/Class/Ethnicity/Sexual Orient./Non-Western)***One course must be taken from the GRCESONW list; Can be double-dipped with Tier One or Tier Two courses*

PRE-MAJOR COURSES**Mathematics (Calculus I, & Calculus II, Calculus III)**MATH 122A/B OR 125 3-5 _____

MATH 129 3 _____

CHEM380 (F) OR MATH 223 3 _____**Physics (Introductory Physics)**PHYS 141 OR 161H 3- 4 _____PHYS 241 OR 261H 3- 4 _____**CHEM MAJOR COURSEWORK**

(GRADE OF C OR HIGHER REQUIRED FOR ALL MAJOR COURSEWORK)

General Chemistry (with labs)CHEM 151 OR 141/143 OR 161/163(F) 4 _____CHEM 152 OR 142/144 OR 162/164 (S) 4 _____**Organic Chemistry****First Semester Lecture and Lab**

CHEM 246A (F) 3 _____

CHEM 247A (F) 2 _____

Second Semester Lecture and Lab

CHEM 246B (S) 3 _____

CHEM 247B (S) 2 _____

Major Courses**Majors Colloquium**

CHEM 395A (S) 1 _____

Quantitative Analysis (Analytical Chemistry)

CHEM 325 Analytical Lecture 2 _____

CHEM 326 Analytical Lab..... 2 _____

Instrumental Analysis

CHEM 401A (S) 3 _____

CHEM 400A (F) 3 _____

Inorganic Chemistry

CHEM 404A (S)..... 3 _____

CHEM 412 3 _____

Biochemistry

BIOC 384 or BIOC 462A(F)..... 3-4 _____

Physical Chemistry

CHEM 480A 3 _____

CHEM 480B or CHEM 481..... 3 _____

CHEM 400B (S) 3 _____

Chemistry Electives (8 units required):

8 units of electives are required. Of those 8 units, a maximum of 3 units can come from list B on the back of this page

_____ ? _____

_____ ? _____

_____ ? _____

Total = 8 _____

UNIVERSITY REQUIREMENTS:120 total units 42 upper division units 2.000+ cum GPA 2.000+ major GPA

MCWA complete _____ 18 of 30 UA units upper division _____

30+ total units at UA _____ <60 correspondence/UA exam units _____

Chemistry Electives A (5 units minimum)

ASTR 448A Astrochemistry (3)
BIOC 385 Biochemistry **OR** BIOC 462B (S) (3)
CHEE/CHEM/MSE 437 Surface Science (S) (3)
CHEM 404B, Inorganic Chemistry II (F) (3)
CHEM 446, Organic Preparations Lab (F) (3)
CHEM 447, Organic Structural Analysis Laboratory (S) (3)
CHEM 450, Synthetic and Mechanistic Organic Chemistry (F) (3)
ENVS 340, Environmental Chemistry (S) (3)
ENVS 462, Environmental Soil and Water Chemistry (3)
ENVS 464, Environmental Organic Chemistry (F) (3)
GEOS 400, Introduction to Geochemistry (Contact department) (3)
MSE 430, Organic Electronic Materials & Devices (F) (3)
MSE 460, Materials Science of Polymers (S) (3)
PCOL 410, Medicinal Chemistry (S) (5)
PHYS 426, Thermal Physics (F, S) (3)
PHYS 431, Molecular Biophysics (S, odd years only) (3)
PHYS 484, Nuclear Magnetic Resonance Spectroscopy (F) (3)
PLS 448A, Plant Biochemistry and Metabolic Engineering (F) (3)
PTY5 407, Chemistry of the Solar System (F, odd years only) (3)
PTY5 416, Asteroids, Comets, Kuiper Belt Objects (F) (3)

Note: Course offerings are subject to change. Please consult the Schedule of Classes for specific semester course information

Chemistry Electives B (3 units maximum)

CHEM 496D, Chemistry Discovery (F) (1)
CHEM 392/492, Directed Research*
CHEM 399/499, Independent Study*
CHEM 399H/499H, Honors Independent Study*
CHEM 405A Basic Lab Safety (1) (S)
CHEM 405B Advanced Lab Safety (1) (S)
CHEM 405C Chemical Hygiene and Regulations (1) (S)
CHEM 491 Preceptorship*
CHEM 491H, Honors Preceptorship*
CHEM 493, Internship*
CHEM 498, Senior Capstone *

If having difficulty enrolling or have questions, contact the department offering the course.

*Requires completion of appropriate forms in order to add units. Forms can be found on CBC website.

Course descriptions/pre-requisites found in catalog.

500 level CHEM courses also approved. 500 level courses in other departments may be pre-approved. Contact a CBC advisor.

B.S. Chemistry Academic Plan

1st Semester Fall

*General Chemistry I w/ Lab (4)
MATH 122A (1)
MATH 122B (4)
ENGL 101 English Composition (3)
Tier I General Education (3)

3rd Semester Fall

***CHEM 246A (3)**
***CHEM 247A (2)**
Chem 380 OR MATH 223 (3-4)
PHYS 141 (4)
Second Language (4)

5th Semester Fall

*CHEM 325 (2)
*CHEM 326 (2)
*BIOC 384 or **462A (3-4)**
Tier I General Education (3)

7th Semester Fall

*CHEM 480A Physical Chemistry I (3)
***CHEM 400A (3)**
CHEM 412 (3) or in spring>>>
*CHEM Elective (3)
Tier II General Education (3)

2nd Semester Spring

*General Chemistry II w/ Lab (4)
MATH 129 (3)
ENGL 102 English Composition II (3)
Tier I General Education (3)
Tier I General Education (3)

4th Semester Spring

***CHEM 246B (3)**
***CHEM 247B (2)**
CHEM395A (1)
PHYS 241 (4)
Second Language (4)

6th Semester Spring

***CHEM401A (3)**
***CHEM 404A (3)**
*CHEM elective (3)
Tier II General Education (3)

8th Semester Spring

*CHEM 480B Physical Chemistry II or CHEM 481 Biophysical (3)
***CHEM 400B Physical Chemistry Lab (3)**
Tier II General Education (3)
*CHEM Elective (3/2)

*Denotes grade of C or better required

Classes in **BOLD** are only offered in the fall or spring as listed.

This checklist indicates CHEMBS requirements. Additional coursework not listed on this page may be required in order to graduate.

Work with your advisor every semester to be sure you are on track to meet all requirements.