Sample Four Year Plan

Biochemistry and Molecular Biology (BS)

This plan provides an example pathway through the major, assuming a student will start in CHEM 130: Chemical Principles I in their first semester. Students whose math placement is lower than Calculus will take CHEM 130 in the Spring semester and should follow the alternative plan.

FALL - Semester 1
CHEM 130: Chemical Principles I
BIOL 107: Cells, Molecules, and Genes
BCMB 145: Freshman BCMB Seminar
TRU 100: Truman Symposium
TRU 110 or TRU 130

SPRING - Semester 2
CHEM 131: Chemical Principles II
MATH 198: Calculus I
STAT 190: Introductory Statistics*
Dialogues coursework

FALL - Semester 3
CHEM 245: Sophomore Seminar
MATH 263: Calculus II
BIOL 300: Genetics
CHEM 329: Organic Chemistry I
CHEM 275: Intro. to Inorganic Principles

SPRING - Semester 4
BIOL 330: Cell Biology
CHEM 331: Organic Chemistry II
CHEM 330: Organic Chemistry I lab**
CHEM 312: Foundations of Chemical Analysis (WE)
Dialogues coursework

FALL - Semester 5
PHYS 185: Physics I***
BCMB elective with lab****
CHEM 345: Junior Seminar
CHEM 332: Organic Chemistry II lab**
Dialogues coursework

SPRING - Semester 6
PHYS 186: Physics II***
CHEM 335 - Biochemistry I: Structure and Function
BCMB elective 2****
Dialogues coursework
JINS 3xx: Junior Interdisciplinary Seminar*

FALL - Semester 7
BCMB 445: Senior Capstone Seminar
CHEM 337: Physical Chemistry of Biochemical Systems
Dialogues coursework
Elective
Elective

SPRING - Semester 8
SPRING - Semester 8
CHEM 326: Physical Chemistry Lab II (WE)
BCMB elective 3****
Dialogues coursework
Elective
Elective

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* Dialogues requirement
** Org I and II lab can be replaced by CHEM 333: Organic Chemistry Laboratory (2 credits)
*** PHYS 195/6 also possible which would add 1 credit hour each semester

****Elective courses that satisfy the “BCMB Elective” include:
CHEM 310 - Modern Methods in Biochemistry
CHEM 435 - Biochemistry II: Metabolism
CHEM 518 - Advanced Topics
BIOL 305 – Virology
BIOL 331 - Introduction to Evolutionary Biology
BIOL 333 - Intro to Neurobiology
BIOL 334 - Molecular Pharmacology
BIOL 362 - Embryology and Developmental Biology

BIOL 370 - Bioinformatics
BIOL 502 - Biometry
BIOL 513 - Microbial Genetics
BIOL 518 - Advanced Topics
BIOL 552 - Molecular Genetics
BCMB 443 - Advanced Research
STAT 331 - Biostatistics

No more than 4 credits total of CHEM 518 and/or BIOL 518 may be used

The Dialogues curriculum requires a certain number of courses/credit hours in the following Perspectives: Social, Arts and Humanities, STEM, Communications, and Statistics. The exact number of courses a student will be required to take during their undergraduate career varies individually according to the credit transferred in.

Department Chair: Please contact the Center for Academic Excellence with any updates to the plan above. Rev. 3/23/2023