

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.

Semester 1

- TRU 120: First Year Seminar (3 cr)
- CHEM 130: Chemical Principles I (4 cr)
- BIOL 107: Cells, Molecules, and Genes (4 cr)
- BCMB 145: Freshman Biochemistry and Molecular Biology Seminar (1 cr)

Semester 3

- CHEM 245: Sophomore Chemistry Seminar (1 cr)
- MATH 263: Analytic Geometry and Calculus II (4 cr)
- BIOL 330: Cell Biology OR BIOL 300: Genetics (4 cr)
- CHEM 329: Organic Chemistry I (3 cr)
- CHEM 275: Intro to Inorganic Principles (1 cr)

Semester 5

- PHYS 185: College Physics I (***) (4 cr)
- BCMB elective with lab (****) (3-4 cr)
- CHEM 345: Junior Chemistry Seminar (1 cr)
- CHEM 332: Organic Chemistry II Lab (**) (1 cr)
- Dialogues Curriculum course (3 cr)

(**) = Organic Chemistry I and II Labs (CHEM 330 and CHEM 332) can be replaced by CHEM 333: Organic Chemistry Laboratory (2 credits)

(***) = PHYS 195/196 also possible which would add 1 credit hour each semester

Semester 7

- BCMB 445: Senior Biochemistry and Molecular Biology Capstone Seminar (1 cr)
- CHEM 337: Physical Chemistry of Biochemical Systems (3 cr)
- Elective (3 cr)
- Elective (3 cr)
- Dialogues Curriculum course (3 cr)

Semester 2

- CHEM 131: Chemical Principles II (4 cr)
- MATH 198: Analytic Geometry and Calculus I (5 cr)
- STAT 190: Basic Statistics (*) (3 cr)
- Dialogues Curriculum course (3 cr)

(*) = Dialogues Curriculum Requirement

Semester 4

- BIOL 300: Genetics OR BIOL 330: Cell Biology (4 cr)
- CHEM 331: Organic Chemistry II (3 cr)
- CHEM 330: Organic Chemistry I Lab (**) (1 cr)
- CHEM 312: WE/Foundations of Chemical Analysis (5 cr)
- Dialogues Curriculum course (3 cr)

(**) = Organic Chemistry I and II Labs (CHEM 330 and CHEM 332) can be replaced by CHEM 333: Organic Chemistry Laboratory (2 credits)

Semester 6

- PHYS 186: College Physics II (***) (4 cr)
- CHEM 335: Biochemistry I - Structure and Function (3 cr)
- JINS 3XX: WE/_____ (3 cr)
- BCMB elective 2 (****) (3-4 cr)
- Dialogues Curriculum course (3 cr)

(***) = PHYS 195/196 also possible which would add 1 credit hour each semester

Semester 8

- CHEM 326: WE/Quantum Mechanics and Spectroscopy Laboratory (2 cr)
- BCMB elective 3 (****) (3-4 cr)
- Elective (3 cr)
- Elective (3 cr)
- Dialogues Curriculum course (3 cr)

NOTES:

- (*) = Dialogues requirement
- (**) = Organic Chemistry I and II Labs (CHEM 330 and CHEM 332) can be replaced by CHEM 333: Organic Chemistry Laboratory (2 credits)
- (***) = PHYS 195/196 also possible which would add 1 credit hour each semester

- WE = Writing Enhanced course
- If you have not completed the Civics Exam, we recommend doing so in your **first year**.
- Truman students are required to complete a [Portfolio](#) to graduate. We recommend starting to compile your work for the Portfolio sooner than later.
- Students must complete their Application to Graduate **the semester prior to graduating**. Apply to graduate through TruView.
- Graduating seniors need to complete their seniors test and questionnaire. We recommend reviewing the [Assessment & Testing page](#) to plan accordingly.
- **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. 7-31-24