

To Admissions Committees/Coordinators:

Since fall of 2016, University of Minnesota pre-health students in the College of Biological Sciences (CBS) have been completing the following sequence of general, organic, and biochemistry courses. The University of Minnesota developed this sequence for life sciences majors to focus on topics and principles that are most important for understanding molecular and chemical features in biology. This approach aligns with curricular innovations being implemented at other institutions, e.g. UCLA and Purdue University. The course names may be unfamiliar, and therefore, we want to provide a short explanation and links to the syllabi. The series refocuses general chemistry and organic chemistry on life science topics and is completed with laboratories within three semesters (rather than the traditional four), and advances students to introductory biochemistry in their fourth semester.


- [CHEM 1081: Chemistry for the Life Sciences I](#) (3 credit lecture in General Chemistry)
- [CHEM 1065: Chemistry Principles I Lab](#) (1 credit lab in General Chemistry)
- [CHEM 1082: Chemistry for the Life Sciences II](#) (3 credit lecture in General and Organic Chemistry)
- [CHEM 1086: Chemistry for the Life Sciences II Lab](#) (1 credit lab in General and Organic Chemistry)
- [CHEM 2081: Chemistry for the Life Sciences III](#) (3 credit lecture in Organic Chemistry)
- [CHEM 2085: Chemistry for the Life Sciences III Lab](#) (2 credit lab in Organic Chemistry)
- [BIOC 3022: Biochemistry for the Life Sciences](#) (3 credit lecture on structure and function of biomolecules (proteins, carbohydrates, lipids, and nucleic acids), central metabolic pathways, and the mechanisms of enzyme action)

For more detailed information about this course series, including course syllabi, please visit z.umn.edu/cbschemistry or contact cbsadv@umn.edu.

This course series fulfills the same degree requirements that our traditional chemistry sequence fulfills. Evidence-based work at Purdue University (e.g. *Schnoebelen et al, J. Chem. Ed., 2018*; *Loudon et al, HHMI-funded NEXUS program*) has shown that this approach improves student performance in organic chemistry and is beneficial for preparing students for advanced life sciences coursework. Students who complete this rigorous 16 credit chemistry sequence (general, organic, and biochemistry) are ineligible to enroll in additional introductory general and organic chemistry coursework at the University of Minnesota due to duplicate course content and credits. Students also complete at least 3 credits of molecular biology through introductory and advanced biological sciences coursework in CBS majors. Based on these factors, we expect that health professional schools will accept this sequence to fulfill general, organic, and biochemistry prerequisites.

If you have any questions about this course sequence and fulfillment of your program's prerequisites, please contact CBS Student Services at 612-624-9717 or cbsadv@umn.edu.

Sincerely,



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