

# Post Baccalaureate Premedical Program

## Curriculum



The nine courses (36 credits) required for the **Post Baccalaureate Premedical program** are listed below. If you have fulfilled one or more of the course requirements listed, please contact our admissions team regarding your eligibility to apply and possible substitution courses.

**Pre-calculus** is a prerequisite course for the program. It should be taken prior to enrollment. An on campus orientation will take place prior to the start of summer courses.

### Summer Year One | 2021

<b>General Chemistry I</b>		Online Lecture	Topics include: stoichiometry; states of matter; periodicity; nomenclature; atomic structure; geometry of molecules; chemical bonding; thermochemistry; chemical reactions; and related consumer, environmental and industrial problems.
<b>General Chemistry I</b>		In-person Accelerated Lab	
<b>General Chemistry II</b>		Classroom/Lab	Further study in general chemistry. Topics include redox chemistry, thermodynamics, chemistry of solutions, chemical kinetics, chemical equilibrium, buffer solutions and electrochemistry.

### Fall Semester | 2021

<b>General College Physics I</b>		Classroom/Lab	Topics in mechanics and thermal physics are discussed. Techniques general to all areas of physics are developed. Three class periods and one three-hour laboratory each week.
<b>Organic Chemistry I</b>		Classroom/Lab	An examination of the fundamental classes of carbon compounds and the relationship of their physical and chemical properties to structure. Three class periods and one three-hour laboratory per week.
<b>Cell Biology</b>		Classroom/Lab	This course provides an introduction to cell structure and function. Major topics include the scientific method of study, the biochemistry and organization of the cell, mechanisms by which energy is harvested and used by cells, how cells reproduce, and how information is stored and used within a cell. Offered in an integrated lecture/laboratory format.

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### Spring Semester | 2022

<b>General College Physics II</b>		Classroom/Lab	This is a continuation of General College Physics I. Techniques are expanded, and topics in electricity, optics and modern physics are added. Three class periods and one three-hour laboratory each week.
<b>Organic Chemistry II</b>		Classroom/Lab	A study of organic compounds containing oxygen, nitrogen and sulfur, including many of commercial and/or biochemical importance. Three class periods and one three-hour laboratory per week.
<b>Biology   Evolution &amp; Diversity</b>		Classroom/Lab	An introduction to the major concept of biology-evolutionary theory. The diversity of life on earth, excluding the vertebrates of the animal kingdom, is then explored in light of this concept. Three lectures and four hours of laboratory per week.

### Summer Year Two | 2022

<b>Biochemistry</b>		Classroom/No Lab	A study of the chemistry and biology of the fundamental molecules of life: carbohydrates, lipids, nucleic acids, amino acids, proteins, enzymes, vitamins and cofactors. The metabolic pathways for producing energy by degradation of carbohydrates, lipids and proteins are also a major component of the course.
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### Recommended Courses | (not included in program cost)

<b>Social Science Course</b>			We highly recommend students take a social science course if they have not had one in more than five years.
<b>Calculus I *</b>			An introduction to the concepts of limits, continuity, derivatives and antiderivatives and their applications, and an introduction to the Riemann integral and integration techniques, including by substitution. Some review of trigonometry and analytic geometry is included.

\* It is recommended that students have Calculus I prior to applying for medical school. This course could be completed following your Post Bacc Premed program. In exceptional circumstances, or as a substitute course for students who have already completed one or more of the program requirements, it could be taken during the program. If you are interested in completing Calculus I at Concordia, consult with our admissions team.