



Northeastern

Department of Chemistry
and Chemical Biology
Northeastern University
360 Huntington Ave
EXP 330
Boston, Massachusetts 02115

June 3, 2024

Dear Admissions Committee,

The Northeastern University Department of Chemistry and Chemical Biology is providing this letter regarding the organization and content of the following General Chemistry Course:

General Chemistry for Sciences Majors (CHEM 1161/2/3)

CHEM 1161/2/3 is a one-semester general chemistry course offered by the Department of Chemistry and Chemical Biology for majors in chemistry and biological sciences and related fields, including pre-health students. The course consists of three 65-minute lectures, a three-hour laboratory, and one 65-minute recitation each week for 13 weeks. We use the "Chemistry: An Atoms-Focused Approach" text, co-authored by Gilbert, Kirss, Foster and Bretz. The content covered by this course includes 14 of the 24 chapters of the text in an intensive, problem-based method. Students are expected to have prepared themselves for the first two chapters of the book, which cover basic atomic structure. From there, time is spent covering topics on light and spectroscopy, chemical bonding, nomenclature, Lewis structures, VSEPR theory, intermolecular forces, phase changes and phase diagrams, stoichiometry, molarity, acid-base titrations, thermodynamics, kinetics, and acid-base equilibrium. During the course, current topics such as climate change and chemistry of the oceans may be introduced. While a lot of topics are covered in this one-semester course, it isn't quite the same coverage as a traditional two-semester General Chemistry sequence. As such, the course does not cover properties of gases, colligative properties, electrochemistry, nuclear chemistry, solid state effects or main group/transition metals. For students majoring in chemistry, these topics are a component of an upper-level course. For those not majoring in chemistry, the topics may or may not be covered depending on the courses the student takes.

Sincerely,

A handwritten signature in black ink, appearing to read "Daniel J. Matthew".

Daniel J. Matthew, Ph.D.
Director of Undergraduate Studies
Department of Chemistry and Chemical Biology
d.matthew@northeastern.edu