Chemistry in Context

Instructor: Dr. N. Ganapathi  
Office – Sterling Chemistry Laboratory (SCL) Room 211

Email address: narasimhan.ganapathi@yale.edu
Office hours: Week days, right after class (see below), or by appointment by email.


Class meetings: Classroom: Sterling Chemistry Laboratory, room 18.
Classes start on Monday, July 2. Class hours: Monday thru Friday, 9:15 to 10:30 am

Goal / Purpose
Understanding basic chemistry facts and concepts. Applying that knowledge to appreciate how chemistry is intricately involved in everything we do in our daily lives. Making prudent decisions for sustainability which is essential for healthy ecosystems, healthy communities, and healthy economies.

Syllabus:
Chapters (and most subtitles in each chapter) in the textbook will be covered in numerical order; for details, look in the Syllabus menu in Canvas and next page. In class, basic and important chemical facts and concepts mentioned in each chapter will be discussed. Students need to study each entire chapter to appreciate how these facts and concepts help us understand what goes on in our everyday lives, and what we can / should do.

Attendance
All class meetings will be mainly discussions of basic chemical concepts and facts. There will be a number of demonstrations to illustrate these concepts and facts. The instructor intends to make each class meeting interesting enough so the students look forward to each class meeting.

Homework
Select set of questions at the end of each chapter from the book, plus a few additional problems.

Midterm tests
Midterm test 1: July 13, Friday, during class time, 9:15 to 10:15 am
Midterm test 2: July 27, Friday, during class time, 9:15 to 10:15 am

Final exam: August 3, Friday 9 am till 12 noon

Grading:
Attendance and class participation: 10%
Midterm test 1: 25%
Midterm test 2: 25%
Final Exam: 40%
**Letter grades:** At the end of the semester, the **class average** of the overall scores (as calculated above) will correspond to a letter grade of **B or B+**. Overall scores slightly less than the class average will correspond to a **B**, whereas overall scores slightly greater than the class average will correspond to a **B+**. Other letter grades will be assigned with reference to the class average, and by utilizing discernible gaps in the distribution of overall scores. In the hypothetical case where a vast majority of students’ perform extremely well and are in a very narrow range of scores, grades will be assigned based on letter grade assignments in previous years in the recent past.

Some friendly advice: Take this course with the attitude that you are taking it because you want to learn some chemistry, not because you have to. Chemistry S101 classes start on Monday, July 2. Do not miss a single class. If you must, it is your responsibility to obtain notes from a friend or classmate. Always keep yourself informed of everything that is happening in class, including demonstrations. The midterm tests and the final exam may have questions related to the demonstrations. Do not hesitate to seek help from Dr. G if and when needed. Do not procrastinate. Cultivate and display interest in the subject. To do well in the midterm tests and the final exam, make sure you can answer all the questions / problems in the **assigned homework sets** on your own (with no help).

**Syllabus and calendar:** The following chapters in the book will be covered in the same order.

- Chapter 1  Portable Electronics
- Chapter 2  The Air We Breathe
- Chapter 3  Radiation from the Sun
- Chapter 4  Climate Change
- Chapter 5  Energy from Combustion
- Chapter 6  Energy from Alternate Sources
- Chapter 7  Energy Storage
- Chapter 8  Water Everywhere: A Most Precious Resource
- Chapter 9  The World of Polymers and Plastics
- Chapter 10  Brewing and Chewing
- Chapter 11  Nutrition
- Chapter 12  Health & Medicine

The first ten chapters will be covered for sure, the remaining two depending on class pace. There will be many demonstrations of reactions and concepts on a daily basis, so full attendance is essential and required.
Syllabus


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The first ten chapters will be covered for sure, the remaining two depending on class pace. There will be many demonstrations of reactions and concepts on a daily basis, so full attendance is vital and strongly encouraged.