

## Chemistry in Modern Society

This is an elective course for non-science majors and is designed to provide a feel for the role that chemistry plays in society and human activities. Throughout the semester, certain economic, social, and political issues may be incorporated into class discussions. Hopefully, a basic level of understanding and familiarity of important chemical concepts will arise after completing this course. The material emphasizes conceptual understanding of chemical ideas and may include some quantitative reasoning.

- Lectures:** In-person. Tuesdays and Thursdays, 11:00 am – 12:15 pm, 1352 Gilman Hall.
- Instructor:** Prof. Gordie Miller
- Office:** 2110 Hach Hall
- Email:** chem160q@iastate.edu
- Office Hours:** Mondays and Wednesdays, 11:00 am – Noon, or by appointment.

### Course Materials:

**Textbook (Required):** “*Chemistry in Context*”, 10<sup>th</sup> ed., Middlecamp et al. The e-book is automatically purchased and accessible through “Immediate Access Course Materials” in Canvas. You may opt out of Immediate Access within the first 10 days of class if, for instance, you would rather purchase a hard copy of the text through an external source.

**Scientific Calculator (Required):** Any cheap scientific calculator will do (should either EE or EXP key). Cell phones may not be used as calculators. Graphing calculators are fine.

**Canvas** serves as our official electronic course interface. Please check Canvas often for important announcements, course materials, and grade information. Visit [www.canvas.iastate.edu](http://www.canvas.iastate.edu)

### Classroom Technology Policy:

To show respect to your fellow students and the instructors, only calculators and any electronic devices that lay flat (e.g., tablet, iPad) may be used during lecture periods. Cell phones should be turned off and laptops with vertical screens should be stored in your backpack.

### Assessments:

**Exams** – 3 exams (50 pts each, DROP 1 LOWEST) and 1 final exam (75 points, cannot be dropped, do not make vacation plans that conflict with final exams)

**Worksheets** – 7 worksheets on class topics/textbook chapters (20 pts each, DROP 1 LOWEST)

**In-class Exercises** – Approximately 10 activities (5 pts each, – DROP 3 LOWEST)

**Grading Scale** will be drawn by the instructor at midterm (around Mar 10) and at the end of the semester.

### Drop Policy / Purpose of Dropped Assignments:

The lowest 1 semester exam, 1 worksheet, and 3 in-class assignment scores will be dropped at semester’s end. The final exam must be taken. The drop policy serves two purposes:

To accommodate sudden emergencies; and

To eliminate the need for the instructor to pass judgment on students’ circumstances.

### Late Work:

Late work is not accepted under any circumstance. Emergency situations are covered by the drop policy.

**Missing/Rescheduling Exams:**

Exams may be rescheduled before or same-day as, but not after, the exam date. Contact the instructor as far in advance as possible to reschedule an exam. No documentation or proof of excuse is required to reschedule a semester exam. Rescheduling the final exam requires a legitimate excuse (not vacation). In cases of sudden emergency for which the exam simply cannot be taken, the exam will be recorded as a zero and will be automatically dropped at semester's end per the drop policy.

**Missing Lecture:**

Attending lecture is your choice. If you miss lecture, it is recommended that you get notes from a classmate. In-class assignments cannot be made up unless they are missed due to ISU-sponsored activity, in which case, inform the instructor.

**Academic Accommodations:**

Any student seeking academic accommodations must work with staff in Student Accessibility Services (SAS). Information is available online at [www.sas.dso.iastate.edu](http://www.sas.dso.iastate.edu); and SAS staff may be contacted by e-mail at [accessibility@iastate.edu](mailto:accessibility@iastate.edu) or by phone at 515-294-7220. SAS is a unit in the Dean of Students Office located at 1076 Student Services Building.

After meeting with SAS staff and eligibility is established, SAS staff creates and issues a Notification Letter listing approved reasonable accommodations to the student and the instructor. Before the instructor will sign the Notification Letter, the student must meet with the instructor in person to discuss how the approved reasonable accommodations can be managed during the semester.

Week	Dates	Topics/Events	Preparatory Reading
1	T 1/17	Introductions; Syllabus What is Chemistry?	Syllabus
	Th 1/19	How Chemistry (Science) is accomplished Chemistry at Iowa State University	
2	T 1/24	Quantities: Scale, Order of Magnitude, Metric Prefixes, Unit Conversions <i>Worksheet #1 posted (Introductory Material)</i>	Article (Canvas) "Trust in Science is not the Problem", Alan Leshner
	Th 1/26	Quantities (cont.), Accuracy vs. Precision	
3	T 1/31	Ch. 1: The Periodic Table <i>Worksheet #1 Due (11:59 pm, pdf only, Canvas)</i>	Text 1.1-1.3
	Th 2/2	Ch. 1 <i>Worksheet #2 posted (Ch. 1)</i>	Text 1.4-1.6
4	T 2/7	Ch. 1	Text 1.7-1.8
	Th 2/9	Ch. 1	Text 1.9-1.10
5	T 2/14	Ch. 2: The Air We Breathe <i>Worksheet #2 Due (11:59 pm, pdf only, Canvas)</i>	Text 2.1-2.6
	Th 2/16	Exam 1 (Introductory Material, Ch. 1)	
6	T 2/21	Ch. 2 <i>Worksheet #3 posted (Ch. 2)</i>	Text 2.7-2.12
	Th 2/23	Ch. 2	Text 2.13-2.16
7	T 2/28	Ch. 3: Radiation from the Sun <i>Worksheet #3 Due (11:59 pm, pdf only, Canvas)</i>	Text 3.1-3.3
	Th 3/2	Ch. 3 <i>Worksheet #4 posted (Ch. 3)</i>	Text. 3.4-3.6
8	T 3/7	Ch. 3	Text 3.7-3.10
	Th 3/9	Ch. 3	Text 3.11-3.12
<b>March Break</b>			
9	T 3/21	Ch. 4 <i>Worksheet #4 Due (11:59 pm, pdf only, Canvas)</i>	Text 4.1-4.3
	Th 3/23	Exam 2 (Ch. 2, 3)	
10	T 3/28	Ch. 4 <i>Worksheet #5 posted (Ch. 4)</i>	Text 4.4-4.6 (just browse calculations in 4.4)
	Th 3/30	Ch. 4	Text 4.7-4.9
11	T 4/4	Ch. 4	Text 4.10-4.12
	Th 4/6	Ch. 5 <i>Worksheet #5 Due (11:59 pm, pdf only, Canvas)</i>	Text 5.1-5.4
12	T 4/11	Ch. 5 <i>Worksheet #6 posted (Ch. 5)</i>	Text 5.5-5.9 (just browse calculations in 5.5)
	Th 4/13	Ch. 5	Text 5.10-5.13

13	T 4/18	Flex Day <i>Worksheet #6 Due (11:59 pm, pdf only, Canvas)</i>	
	Th 4/20	Exam 3 (Ch. 4, 5)	
14	T 4/25	Ch. 7 <i>Worksheet #7 posted (Ch. 7)</i>	Text 7.1-7.3
	Th 4/27	Ch. 7	Text 7.4-7.7
15	T 5/2	Ch. 7	Text 7.8-7.10
	Th 5/4	Flex Day <i>Worksheet #7 Due (11:59 pm, pdf only, Canvas)</i>	
<b>Final Exam – Wed. May 10, 9:45 – 11:45 am, 1352 Gilman</b> ISU Final Exams policy will be followed ( <a href="https://www.registrar.iastate.edu/students/exams">https://www.registrar.iastate.edu/students/exams</a> ).			