

Syllabus for Chemistry 127

Fall 2021

Lecturer: Professor Leslie Jimenez

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Office Hours: T 10 a.m to 12 p.m. (noon); Webex

(<https://rutgers.webex.com/meet/ljimenez>)

"Impact of Chemistry" is designed for non-science majors and has no prerequisites. It will focus on how the fundamental concepts of chemistry relate to human life, culture, and everyday decisions. To make informed decisions in matters related to chemistry, some knowledge of chemistry is required; gaining that knowledge is a main goal of the course. Important chemical concepts will be introduced throughout the course, but not in isolation. Rather, they will be introduced in the context of very real environmental, social, moral, or ethical concerns (e. g., should unapproved, but potentially beneficial drugs be administered upon request to terminally ill patients)?

Textbook

"Chemistry in Context", 10th ed. by Bradley Fahlman et al. The publisher is McGraw-Hill Education (<https://www.mheducation.com>). You should purchase the bundle with the ebook, plus access to the online homework and adaptive assignments, videos and study resources (ISBN 9781264225620 or 1264225628). McGraw-Hill's Connect is the online homework and assignment system that will be used in this course. To register in Connect, please visit:

<https://connect.mheducation.com/class/l-jimenez-fall-2021-11-am>

and click "Register Now". Enter your email address and click "Begin". Follow the prompts until you get to the "access your course materials" page. You can either click the "Start Now" button, which will give you two weeks of free access or enter the access code you received when you purchased one of the bundles listed above and click "Redeem". For McGraw-Hill's tech support, call 1-800-331-5094 or <https://www.mhhe.com/support>.

Online Homework

The Connect assignments will be due on Sundays, with the following two exceptions: Ch 1 homework will be due on Friday, Sept. 17 and Ch. 12 homework will be due on Friday, Dec. 10.

Grading

Grades will be based on the point breakdown shown below. The majority of the point total is based on individual performance (exams, attendance) and the rest is based on the group presentations.

2 Midterm exams	200 pt. (100 points each)
Final Exam	200 pt.
Group position papers (3)	60 pt.
Online homework	90 pt.
<u>Attendance</u>	<u>50 pt.</u>
Total	600 pt.

Ch. 1-2: (Sept. 8-20)

Session 1. Sept. 8. Course overview, ch. 1 material, assignment to groups.

Session 2. Sept. 9. Ch. 1 lecture/discussion,

Session 3. Sept. 13. Writing group contracts, ch. 2 lecture/discussion.

Session 4. Sept. 16. Ch. 2 lecture/discussion.

Session 5. Sept. 20. Ch. 1 & 2 presentations. Hand in position papers.

Ch. 3 & 5: (Sept. 23 - Oct. 7)

Session 1. Sept. 23. Ch. 3 lecture/discussion.

Session 2. Sept. 27. Ch. 3 lecture/discussion.

Session 3. Sept. 30. Ch. 5 lecture/discussion.

Session 4. Oct. 4. Ch. 5 lecture/discussion.

Session 5. Oct 7. Ch. 3 & 5 presentations. Hand in position papers.

MIDTERM EXAM I. Oct. 11.

Ch. 4: (Oct. 14-25)

Session 1. Oct. 14. Ch. 4 lecture/discussion.

Session 2. Oct. 18. Ch. 4 lecture/discussion.

Session 3. Oct. 21. Ch. 4 lecture/discussion.

Session 4. Oct. 25. Ch. 4 presentations. Hand in position papers.

Ch. 6: (Oct. 28-Nov. 4)

Session 1. Oct. 28 Ch. 6 lecture/discussion.

Session 2. Nov. 1. Ch. 6 lecture/discussion.

Session 3. Nov. 4. Ch. 6 presentations. Hand in position papers.

MIDTERM EXAM II. Nov. 8.

Ch. 7 & 8: (Nov. 11-22)

Session 1. Nov. 11. Ch. 7 lecture/discussion.

Session 2. Nov. 15. Ch. 7 & 8 lecture/discussion.

Session 3. Nov. 18. Ch. 8 lecture/discussion.

Session 4. Nov. 22. Ch. 7 & 8 presentations. Hand in position papers.

Ch. 12 & 13: (Dec. 2 – Dec. 13)

Session 1. Dec. 2. Ch. 12 lecture/discussion.

Session 2. Dec. 6. Ch. 12 & 13 lecture/discussion.

Session 3. Dec. 9. Ch. 13 lecture/discussion.

Session 4. Dec. 13. Ch. 12 & 13 presentations. Hand in position papers.

Final Exam: Thursday, Dec. 16, 8-11 a.m.

Presentations

Another goal of the course is to improve your critical thinking, public speaking and writing skills with regard to scientific issues that impact society. To this end, students

will be asked to research a particular issue a little more in depth and give an approximately 5-minute presentation to the class, followed by questions from the audience. You may want to present both sides of an issue, if the topic at hand is a controversial one (e.g. climate change).

- **Introduction:** Introduce your topic and give any pertinent background information.
- **Present Results:** Each presentation will provide an opportunity for students to contribute to a 1-2 page position paper as part of a group effort. Give any concrete scientific evidence that supports a particular position. Explain why people might interpret the same results differently and what their motivations might be.
- **Conclusion:** Give a brief summary of your results or findings on the topic of interest.

In today's society and particularly in the workplace, it is important to be able to work effectively in groups. Each student will be part of a group of four students. Each group will draft a "Group Contract" in class during the second week of the semester. Once constituted, groups will remain intact for the entire semester. Each group will be responsible for class participation, and for the preparation of the presentations. Each group will receive a single presentation grade. Groups 1-8 will give presentations on Sept. 19, Oct. 25, and Nov. 22. Groups 9-17 will give presentations on Oct. 7, Nov. 4, and Dec. 13.

Each group should give me a **1-2 page summary** of their presentation, which is due on the presentation date (please include all group members' names). Also please send me a copy of your Powerpoint presentation (can be a pdf file).

A word of caution: not all hits are equally credible. Typically, material provided by learned journals, universities (sites ending in **.edu**), government agencies (NASA, NSF, etc.-- sites ending in **.gov**) and leading newspapers is more reliable than information obtained elsewhere.

Chemistry in Context Website

When you login to your Connect account, you have use of the “Student Resources” section. The site and links available therein contain a wealth of information that is directly applicable to the material covered in class. By using it along with appropriate search engines, you can obtain

“real world” data relevant to any local community, state, region or country

documents offering global perspectives on issues

timely information including reports, legislation, regulations or guidelines

on-line journals and current news articles

exposure to multiple viewpoints (consumer, industry, government, etc.).