

Chem 1100 Chemistry and Society Tentative-subject to modification-

University of Toledo, College of Natural Sciences and Mathematics

3 Credit Hours, Spring, 2022

Instructor: Dr. Eric Findsen

Email: Eric.Findsen@utoledo.edu

Office: 2278 WO Phone: 419-530-1506

Office Hours: TBA

Course Sections: 001 BO 1045 M & W 2:20 - 3:50 PM

Required Text and Materials:

Text: *We are not using a text this semester. Course information will be provided by my lecture notes and assigned readings.*

Calculator: It must have the ability to handle powers of 10 and the log function.

Course Overview

This course is offered in order to provide you with a background in chemistry to allow you to understand and appreciate various aspects of chemistry that affect your life **EVERYDAY**. The aim is for you to be an informed consumer, an active patient as you interact with the medical community, and, in general a citizen who is better able to make decisions which have a scientific basis – especially on important environmental issues. This is a class for non-science majors – *so not for those whose major is science, medicine or engineering.*

Course Objectives

Because these subjects are most likely to be of interest to you.

Upon completion of this course, you will be able to:

1. Have a basic understanding of the principles of Chemistry and how they impact our lives
2. Explain the connection between your health and what you breathe.
3. Apply what you know about air pollution to ways of living that result in cleaner air.
4. Describe and characterize the ozone layer.
5. Discuss the interaction of radiation with matter.
6. Evaluate articles on green chemistry alternatives to ozone-depleting compounds.
7. Understand the different processes that take part in Earth's energy balance.
8. Evaluate how human activities contribute to global climate change.
9. Analyze, interpret, evaluate, and critique news stories on global climate change including graphical data.
10. Assess how fossil fuels, biofuels, and gasoline additives affect fuel economy, tailpipe emissions, human health, the environment, and sustainability issues.
11. Clean water How to make it
12. Describe how green chemistry and its applications can contribute to clean water.
13. Summarize possible solutions to our global water challenges.
14. Explain the causes of ocean acidification and acid precipitation.
15. Compare and contrast chemical and nuclear reactions.
16. Assess the risks and benefits in regard to the use of nuclear power.
16. Describe ways in which food production connects to land use, water use, energy use, and issues of global climate change.
17. Describe ways to decrease the carbon footprint of food you eat.

Chem 1100 Chemistry and Society Tentative-subject to modification-

University of Toledo, College of Natural Sciences and Mathematics

3 Credit Hours, Spring, 2022

Teaching Strategies and Course Components

It highly recommended that you proceed in this order as it reflects the design of the course.

1. Occasionally, there will be short quizzes the beginning of lectures on topics covered in the previous lectures.
2. There will be homework assignments. Most will be problems based upon topics covered in lecture and mathematical in nature, others will be short essays based upon questions posed in class.

Examinations

There will only three exams. Two hour exams given in class and a final exam. All chapters covered in this course will be on the final exam.

Prerequisites

We will use math to a modest degree including basic Algebra. It is recommended that you have achieved one or more of the following: passed a college algebra level math class (MATH 1320/1340/1750); a math ACT of 19 or above; a college algebra test score of 8 or above; elementary algebra test score of 10 or above; high school gpa of 3.00 or above.

Grading Policies

Course Points

The following is the distribution of possible points in the course:

Hour Exam	100 x 2	200 pts
Quizzies (in class)		30 pts
Homework Assignments		70 pts
Final Exam		<u>200 pts</u>
Total:		500pts

Grade Scale

These are the minimum percentages of total points needed to receive the indicated grade.

	A	93%	A-	90%	
B+	87%	B	83%	B-	80%
C+	77%	C	73%	C-	70%
D+	67%	D	63%	D-	60%

Students are expected to complete and submit all assignments and the final exam by the due date listed in the master course schedule. Late assignments and a make-up final will not be permitted unless arrangements are discussed and approved well before the required due date. Ask questions as soon as possible by email or by phone if you do not understand an assignment.

Chem 1100 Chemistry and Society Tentative-subject to modification-

University of Toledo, College of Natural Sciences and Mathematics

3 Credit Hours, Spring, 2022

Technical Skills

To succeed in this course, it will be important for you to possess the following technical skills:

1. Rename, delete, organize, and save files.
2. Create, edit, and format word processing and presentation documents.
3. Copy, paste, and use a URL or web address.
4. Download and install programs and plug-ins.
5. Send and receive email with attachments.
6. Locate and access information using a web search engine.
7. Use chat or IM software for real-time communication.
8. Use a learning management system.
9. Use a basic calculator.

Student Disability Services

[Student Disability Services](#) provides accommodations and support services to students with disabilities.

Counseling Center

[The Counseling Center](#) is the university's primary facility for personal counseling, psychotherapy, and psychological outreach and consultation services. The Counseling Center staff provide counseling (individual and group), mental health and wellness programming, and crisis intervention services to help students cope with the demands of college and to facilitate the development of life adjustment strategies.

Services for Online Students

Knowing what to do, when to do it, and who to contact can often be overwhelming for students on campus - even more so for distance learners. Visit the [Resources for Current Students](#) webpage to learn more about the wide range of services for online students.