CHEM 1100
Chemistry and Society
(Section 901, Fall 2021)
University of Toledo, Department of Chemistry and Biochemistry
College of Natural Sciences and Mathematics

Instructor:	Prof. Xiche Hu
Office Hours:	MTR.: 11:00 AM - 12:00 noon or by appointment
Office Location:	Wolf Hall 2277
Office Phone:	419-530-1513
Email:	xhu@utoledo.edu

Course Websites:
https://blackboard.utdl.edu/webapps/login/

Required Text and Materials
Textbook: Fahlman, B.D et al, *Chemistry in Context: Applying Chemistry to Society*, **10th Ed**, published by McGraw-Hill Higher Education, ISBN 978-1260240849
Online Homework Access Code: McGraw-Hill Connect/LearnSmart, ISBN: 978-1260240849
 (Note: the Connect Access is provided automatically as part of an IA (Inclusive Access) course)
Calculator: Must have the ability to handle powers of 10.

Course Overview
In this course, students will be acquainted with the fundamental concepts of chemistry and learn to relate these concepts to chemical issues that affect students' own daily lives. "Chemistry in Context" reveals the chemistry behind our fuels, foods, plastics, cosmetics, medicines and a host of other substances and products we use in our everyday lives. By examining the materials of our everyday lives using the science of chemistry as a foundation, students will learn how the science of chemistry operates and gain useful insights into what these common substances are and how they work. This is a class for any non-science major – *so not for those whose major is science, medicine or engineering.*

Course Topics
After considering the subjects most likely to be of interest to you, we will study chapters 1-7 and 11.

Chapter	Topic
1	Portable Electronics: The Periodic Table in the Palm of Your Hand
2	The Air We Breathe
3	Radiation from the Sun
4	Climate Change
5	Water Everywhere: A Most Precious Resource
6	Energy From Combustion
7	Energy from Alternative Sources
11	Nutrition

Course Objectives

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

- Explain the connection between your health and what you breathe.
- Apply what you know about air pollution to ways of living that result in cleaner air.
- Describe and characterize the ozone layer.
- Discuss the interaction of radiation with matter.
- Evaluate articles on green chemistry alternatives to ozone-depleting compounds.
- Understand the different processes that take part in Earth's energy balance.
- Evaluate how human activities contribute to global climate change.
- Analyze, interpret, evaluate, and critique news stories on global climate change including graphical data.
- Assess how fossil fuels, biofuels, and gasoline additives affect fuel economy, tailpipe emissions, human health, the environment, and sustainability issues.
- Evaluate how human activities contribute to the formation of acid rain.
- Connect global climate change with the supply and demand of water.
- Describe how green chemistry and its applications can contribute to clean water.
- Summarize possible solutions to our global water challenges.
- Compare and contrast chemical and nuclear reactions.
- Assess the risks and benefits in regard to the use of nuclear power.
- Describe ways in which food production connects to land use, water use, energy use, and issues of global climate change.
- Describe ways to decrease the carbon footprint of food you eat.

Teaching Strategies and Course Components

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

0. **Watch the short intro video for each chapter.**

1. **Read the chapter assignment from the text.** Chapters are divided into two or three parts for convenience.

2. **Complete the LearnSmart module after you have read the chapter assignment.** The LearnSmart assignment will have a deadline for completion such that <u>points will only be earned if this deadline is met.</u> You can complete this assignment as many times as you wish. Each is designed to be completed in 30 minutes or less. But you should not attempt these assignments unless you have read the book. Each is worth 10 points.

3. **Watch the PowerPoint presentation on the chapter/half-chapter.** You can watch the presentation as many times as you want. You can pause and replay any section. You could watch it before completing the LearnSmart module as long as you meet the deadline. PPT presentations will be available until the end of the course, so available for review.

4. **Complete Homework Assignments** – These assignments, test your knowledge and are primarily based on the end-of-chapter questions. Complete this after watching the PowerPoint presentation. These include short-answer and multiple-choice questions. You will have 3 chances over several days to provide the correct answers. There is no grade penalty for using all 3 attempts. <u>For full credit you must complete it correctly by the deadline.</u> Each is worth 30 points.

Earnable Points

The LearnSmart and Connect homework assignments are based on an earnable points model. The points available are somewhat more than the maximum you can earn in each category (see below), so you can miss some questions and even some assignments and still earn full credit – but be careful. The excess number of points is not great. You should consider all assignments as required. Note: For the LearnsSmart modules and the Homework you earn your highest score so repeating for review will not hurt your grade.

Course Project

A course project on a socially relevant chemistry topics covered in the first seven chapters of the textbooks will be assigned. Your will have the option to choose a topics according to your own interest among several provided topics. A detailed guideline on the course project will be provided at the time of the assignment.

Examinations

There will be only one exam, a final exam. All chapters covered in this course will be on the final exam. **Be sure that you are available and have access to a computer on Monday, December 11th**.

Grading Policies
Course Points
The following is the distribution of possible points in the course:

LearnSmart & Homework combined: Completed on Connect	500 pts
Participation*	20 pts
Course Project	80 pts
Final Exam	200 pts
Total:	**800 pts**

*: Participation points are assigned based on your participation in all class activities such as discussion board posting, timely registration for Connect.

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

		A	91%	A-	89%
B+	86%	B	82%	B-	79%
C+	75%	C	70%	C-	67%
D+	65%	D	60%	D-	56%

Students are expected to complete and submit all assignments and the final exam by the due date listed for each. 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.

Work Week
All assigned work is to be completed by 11:59 PM on the date specified on the course schedule. You are encouraged to work ahead so that if you have any difficulties with the material or your personal schedule you have enough time to meet the deadlines.

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.

Technology Requirements

Browser Check Page

Students need to have access to a properly functioning computer throughout the semester. The Browser Check Page will enable you to perform a systems check on your browser, and to ensure that your browser settings are compatible with Blackboard, the course management system that hosts this course.

Software

Student computers need to be capable of running the latest versions of plug-ins, recent software and have the necessary tools to be kept free of viruses and spyware. The computer needs to run the following software, available in the Online Learning Download Center.

- Word Processing Software
- Adobe Acrobat Reader
- Apple QuickTime Player
- Java Plugin Console
- Adobe Flash Player
- Adobe Shockwave Player
- Mozilla Firefox Browser - Recommended

Internet Service

High-speed Internet access is recommended as dial-up may be slow and limited in downloading information and completing online tests. This course does contain streaming audio and video content.

Use of Public Computers

If using a public library or other public access computer, please check to ensure that you will have access for the length of time required to complete tasks and tests. A list and schedule for on-campus computer labs is available on the Open Lab for Students webpage.

UT Virtual Labs

Traditionally, on-campus labs have offered students the use of computer hardware and software they might not otherwise have access to. With UT's Virtual Lab, students can now access virtual machines loaded with all of the software they need to be successful using nothing more than a broadband Internet connection and a web browser.
The virtual lab is open 24/7 and 365 days a year at VLAB: The University of Toledo's Virtual Labs.

System requirements for McGraw-Hill Connect

"Check My Computer" is available at https://mhdemo.simnetonline.com/sp/?v=2#requirements

SimNet® Online currently requires:

High-speed Internet connection, Adobe Flash Player* v10.1+*, Adobe Acrobat Reader*

Browser Required:
FireFox v12+, Internet Explorer v9+, Chrome v18+, Safari v5+

Browser Recommended:
FireFox v23+, Internet Explorer v10+, Chrome v28+, Safari v6+

Americans With Disabilities Act

The Americans with Disabilities Act (ADA) requires that reasonable accommodations be provided for students with physical, sensory, cognitive, systemic, learning, and psychiatric disabilities. In accordance with the ADA and university policy, if you have a documented disability and require accommodations to obtain equal access in this course; please contact me to discuss any necessary accommodations and contact Student Disability Services for verification of eligibility at 419-530-4981 (voice) or 419-530-2612 (TDD).

Communication Guidelines

Email: Students are expected to check their UT email account frequently for important course information. This class is being taught for you, so if you are having trouble understanding any aspect of it, please let me know. I am here to help, and will do my best to respond to email within 24 hours.
Discussion: In this online course, participation is vital to your success, and your active engagement during discussion is crucial to learning. You are encouraged to work together with other students and with me to be successful in this course. Never post answers on the discussion board.

Netiquette: It is important to be courteous and civil when communicating with others. Students taking online courses are subject to the communication regulations outlined in the Student Handbook. To ensure your success when communicating online, take time to familiarize yourself with the "dos" and "don'ts" of Internet etiquette.

Course Policies
Drop, Withdrawal and Incomplete Grades

Course drop and withdrawal procedures have been set by the University faculty. *Dropped* courses do not appear on your transcript. The deadline for dropping is 5/20. If you are in a course after that date, there will be a grade on your transcript. You may *withdraw* from the course and receive a grade of **W**. The deadline for withdrawal is 6/7**. W** grades do not affect your GPA. You do not need your instructor's permission for either process. Please note that course registration changes might change your **financial aid**.

A course grade of **Incomplete** is given only to those who have completed all but a small percentage of course requirements for an acceptable reason. If you have a serious problem near the end of the course, communicate with me as soon as possible. You will retain all of your previously determined grades.

Copyright Notice

The materials in the course website are only for the use of students enrolled in this course for purposes associated with this course, and may not be retained or further disseminated.

Academic Dishonesty: You are urged to refer to the university's policy on Academic Dishonesty in the university catalogue. Violation of this policy can result in a course grade of **F** with additional university sanctions possible.

Distance Learning Policy Statement on Academic Dishonesty (adapted)

Academic dishonesty will not be tolerated. Among the aims of education are the acquisition of knowledge and development of the skills necessary for success in any profession. Activities inconsistent with these aims will not be permitted. Students are responsible for knowing what constitutes academic dishonesty. If students are uncertain about what constitutes plagiarism or cheating they should seek the instructor's advice. Examples of academic dishonesty include, but are not limited to:

- *Plagiarizing or representing the words, ideas or information of another person as one's own and not offering proper documentation;*
- *Giving or receiving, prior to an examination, any unauthorized information concerning the content of that examination;*
- *Communicating during an examination in any manner with any unauthorized person concerning the examination or any part of it;*
- *Giving or receiving substantive aid during the course of an examination;*
- *Commencing an examination before the stipulated time or continuing to work on an examination after the announced conclusion of the examination period;*
- *Submitting the same written work to fulfill the requirements for more than one course.*

While academic integrity is particularly the responsibility of the student, the faculty members also have a responsibility. Faculty members are expected to inform their students explicitly as to what materials and procedures are authorized for use in the preparation of assignments or in examinations (e.g., the use of calculator, computer, text materials, etc.). Should cases of academic dishonesty be found among students, the instructor may choose to counsel the student, or the following sanctions may be imposed:

- *The student may be assigned an F for the work in question.*
- *The student may be assigned an F for the course. In this case the instructor should inform the Dean and the student of this action. The Dean will make certain that the student receives the F grade and is not permitted to withdraw from the course.*
- *The student may be placed on probation or suspended for some definite period of time, dismissed or expelled by the Dean if either the seriousness of the offense or a record of repeated offenses warrants it. A notation that such a sanction has been imposed will be made part of the student's permanent record. It is expected that the Dean will consult with the instructor and the student in making such a judgment, and that the Dean will notify the student of the sanction imposed and of the appeals procedure.*

A student found to be academically dishonest by a faculty member may appeal according to procedures approved by the respective colleges. The procedures for making a final appeal to the Student Grievance Committee may be found in the Student Handbook. Specifically for CHEM 1100 Via Distance Learning:

- *You may confer with others in the class about the work you are doing (except the final exam), but you must submit what you have personally determined is the correct and required information. You are not to merely get the answer from others. For the final exam, you must work completely on your own.*
- *For assigned discussion postings, the words must be your own, or in quotes it they come directly from another source. See above for plagiarism issues.*
- *When in doubt, ask for clarification.*

Technical Support

If you encounter technical difficulties with Blackboard, please contact the UT Online Help Desk at (419) 530-8835 or utdl@utoledo.edu. The Help Desk offers extended hours in the evenings and on weekends to assist students with technical problems. When calling after hours, leave a detailed message, including your Rocket Number and phone number, and an Online Learning staff member will respond on the next business day. The UT Online Help Desk website is available at: http://www.utoledo.edu/dl/helpdesk/index.html

Technical questions related to on-campus Internet access, virtual labs, hardware, software, personal website hosting, and UTAD account management can be directed to UT's IT Help Desk at (419) 530-2400 or ithelpdesk@utoledo.edu. The IT Help Desk website is available at http://www.utoledo.edu/it/CS/HelpDesk.html.

Learner Support

The University of Toledo offers a wide range of academic and student support services that can help you succeed:

eTutoring Services

The Ohio eTutoring Collaborative, in partnership with The University of Toledo, now provides online tutoring support for all UT students. eTutoring Services are offered in a wide array of subjects, including Writing, Math, Calculus, Statistics, Accounting, Biology, Chemistry, and Anatomy and Physiology.

eLibrary Services Portal

The eLibrary is a customized gateway to UT Libraries for online students. It was designed to help you locate the best online library resources without leaving Blackboard.

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.