Chemistry and Society  
The University of Toledo  
Department of Chemistry and Biochemistry  
College of Natural Sciences and Mathematics  
CRN: 47886 (CHEM 1100- 901)

Instructor: Dr. Zin-Min Tun  
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Office Location: BO 2034  
Office Phone: (419) 530-4591  
Office Hours: M 10:30 am– 1:00 pm  
          W 11:30 am– 2:00 pm  
          Or by appointment

Offered: Fall 2019  
Course Website: Blackboard Learn  
Class Location: Blackboard Learn  
Credit Hours: 3

COURSE/CATALOG DESCRIPTION
An introduction to basic chemistry and a survey of the impact that chemistry has on society. Topics include: power, energy, and fuels; water and pollution; soaps and detergents; nutrition; poisons and toxins; plastics and polymers; drugs.

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 any non-science major.

COURSE OBJECTIVES & LEARNING OUTCOMES
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.
• 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.
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.

PREREQUISITES

None

REQUIRED TEXTS AND MATERIALS

The following materials are **required** for this course:

2. **Online Homework Access Code:** McGraw-Hill Connect/LearnSmart (Note: the ebook comes free with this required online homework access code) ISBN: 978-0-07-353546-3
3. **Calculator:** Must have the ability to handle powers of 10.

TECHNOLOGY REQUIREMENTS AND TECHNICAL SKILLS

Please view the [technology considerations](#) for this course, including technical skills needed, general technology requirements, and technology privacy policies.

**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 system 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+

Technical Skills: To succeed in this course, you will need 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.

ACCESSIBILITY OF COURSE TECHNOLOGIES
Please view Accessibility of Course Technologies for information regarding the accessibility of Blackboard and other technologies used in this course.

ACADEMIC POLICIES
All students at the University of Toledo are expected to read, understand, and follow the academic policies that govern their attendance at the University. These policies include, but are not limited to, academic dishonesty, academic forgiveness, adding and dropping a course, grades and grading, and the missed class policy. Please use the following URL to read a comprehensive list of academic policies that pertain to you in this class and throughout your academic journey: Undergraduate Academic Policies. If you have any questions after reading through the policies, please let me know.

COURSE POLICIES

Drop, Withdrawal and Incomplete Grades: Course drop and withdrawal procedures have been set by the University faculty. Pay attention to those add/drop dates as they pass very quickly during the semester! For both dropping the course or withdrawing you should go to Rocket Solution Central in Rocket Hall. 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.

COMMUNICATION GUIDELINES

Communication: I am here to help, and will do my best to respond to inquiries in a timely manner. Learners can expect a reply to emails within 24-48 hours. Please include your course number and section number (CHEM11000-901) either in the subject line or in the body of the email to facilitate the communication. Feedback on assignments will be posted within 1 week after the due date, unless otherwise noted.

Email: Students are expected to check their UT email account frequently for important course information. If you are having trouble understanding any aspect of the course, please let me know.

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

OVERVIEW OF COURSE GRADE ASSIGNMENT

Midterm Grading

Midterm grades are assigned the 8th week of class and are used to assist students with determining their academic standing. Attendance is also recorded during the 8th week to meet state and federal laws regarding financial aid disbursement. Please note, if you are not attending class it could affect your financial aid (scholarships, grants, loans or Federal Work Study). If you decide you are not going to attend this class (or any other class you have registered for), you must formally withdraw (drop) from the course. You can do this by logging onto the myUT portal, clicking on the “Student” tab, and then under “My Toolkit” click on Register/Drop/Withdraw.

Your midterm grade will be calculated as follows:

- LearnSmart Completed on Connect (Chapter 1-4) 45.84%
- Quizzes Completed on Connect (Chapter 1-4) 50.00%
- Participation 4.16%

Total: 100.00%

Grade Scale

The grading scale in this course is as follows:

- A 93%
- A- 90%
- B+ 87%
- B 83%
- B- 80%
- C+ 77%
- C 73%
- C- 70%
- D+ 67%
- D 63%
- D- 60%
- F <59%
Final Grading
Your final grade will be calculated as follows:

<table>
<thead>
<tr>
<th>ASSESSMENT MEASURES</th>
<th>TOTAL POINTS</th>
<th>PERCENTAGE OF FINAL GRADE</th>
</tr>
</thead>
<tbody>
<tr>
<td>LearnSmart</td>
<td>200</td>
<td>33.33%</td>
</tr>
<tr>
<td>Quizzes</td>
<td>240</td>
<td>40.00%</td>
</tr>
<tr>
<td>Course Project</td>
<td>40</td>
<td>6.66%</td>
</tr>
<tr>
<td>Participation</td>
<td>20</td>
<td>3.33%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>100</td>
<td>16.66%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>600</td>
<td>100%</td>
</tr>
</tbody>
</table>

Assignments/Assessment Descriptions

LearnSmart: Complete the LearnSmart module after you have read the chapter assignment. The LearnSmart assignment will have a deadline for completion such that points will only be earned if this deadline is met. 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.

Quizzes: Quizzes are designed to test your knowledge and are primarily based on the end-of-chapter questions. Complete these after watching the PowerPoint video. Each is worth 30 points. For full credit you must complete it correctly by the deadline.

Course Project: The purpose of this assignment is for you to use the information that you learned this semester to analyze a news story about our topics. In this project, you will summarize an article, connect the information from the article with what you have learned in the course about that topic, draw a connection to everyday life, and propose future actions if relevant. Course project is worth 40 points.

Participation: Participation points are assigned based on your participation in all class activities such as discussion board posting, timely registration for Connect. Participation is worth 20 points.

Final Exam: There will only one exam in this course, a final exam. All chapters covered in this course will be on the final exam. Final exam is worth 100 points. Please make sure that you are available and have access to a computer on Monday, December 9th.

UNIVERSITY POLICIES

Policy Statement on Non-Discrimination on the Basis of Disability (ADA)
The University is an equal opportunity educational institution. Please read The University’s Policy Statement on Nondiscrimination on the Basis of Disability – Americans with Disabilities Act Compliance.

Academic Accommodations
The University of Toledo embraces the inclusion of students with disabilities. We are committed to ensuring equal opportunity and seamless access for full participation in all courses. For students who have an accommodations memo from Student Disability Services, I invite you to correspond with me as soon as possible so that we can communicate confidentially about implementing accommodations in this course. For students who have not established affiliation with Student Disability Services and are
experiencing disability access barriers or are interested in a referral to healthcare resources for a potential disability or would like information regarding eligibility for academic accommodations, please contact the Student Disability Services Office by calling 419.530.4981 or sending an email to StudentDisability@utoledo.edu.

ACADEMIC AND SUPPORT SERVICES
Please view the Learner Support page for links and descriptions of the technical, academic, and student support services available to UT students.

SAFETY AND HEALTH SERVICES FOR UT STUDENTS
Please use the following link to view a comprehensive list Campus Health and Safety Services available to you as a student.

Tentative Course Schedule

<table>
<thead>
<tr>
<th>Week</th>
<th>Dates</th>
<th>Topic</th>
<th>Assignment Due</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>8/26-9/1</td>
<td>Portable Electronics: The Periodic Table in the Palm of Your Hand (Ch. 1)</td>
<td>LS Ch1_P1; LS Ch1_P2; Ch1_Q</td>
</tr>
<tr>
<td>2</td>
<td>9/2-9/8</td>
<td>The Air We Breathe (Ch. 2)</td>
<td>LS Ch2_P1; LS Ch2_P2; LS Ch2_P3; Ch2_Q</td>
</tr>
<tr>
<td>3</td>
<td>9/9-9/15</td>
<td>The Air We Breathe (Ch. 2)</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>9/16-9/22</td>
<td>Radiation From the Sun (Ch. 3)</td>
<td>LS Ch3_P1; LS Ch3_P2; LS Ch3_P3; Ch3_Q</td>
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<tr>
<td>5</td>
<td>9/23-9/29</td>
<td>Radiation From the Sun (Ch. 3)</td>
<td></td>
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<tr>
<td>6</td>
<td>9/30-10/6</td>
<td>Climate Change (Ch. 4)</td>
<td>LS Ch4_P1; LS Ch4_P2; LS Ch4_P3; Ch4_Q</td>
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<tr>
<td>7</td>
<td>10/7-10/13</td>
<td>Climate Change (Ch. 4)</td>
<td></td>
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<tr>
<td>8</td>
<td>10/14-10/20</td>
<td>Energy from Combustion (Ch. 5)</td>
<td>LS Ch5_P1; LS Ch5_P2; Ch5_Q</td>
</tr>
<tr>
<td>9</td>
<td>10/21-10/27</td>
<td>Energy from Combustion (Ch. 5)</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>10/28-11/3</td>
<td>Energy from Alternative Sources (Ch. 6)</td>
<td>LS Ch6_P1; LS Ch6_P2; Ch6_Q</td>
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<tr>
<td>11</td>
<td>11/4-11/10</td>
<td>Energy from Alternative Sources (Ch. 6)</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>11/11-11/17</td>
<td>Energy Storage (Ch. 7)</td>
<td>LS Ch7_P1; LS Ch7_P2; Ch7_Q</td>
</tr>
<tr>
<td>13</td>
<td>11/18-11/24</td>
<td>Energy Storage (Ch. 7)</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>11/25-12/1</td>
<td>Water Everywhere: A Most Precious Resource (Ch. 8)</td>
<td>LS Ch8_P1; LS Ch8_P2; LS Ch8_P3; Ch8_Q; Course Project</td>
</tr>
<tr>
<td>15</td>
<td>12/2-12/8</td>
<td>Water Everywhere: A Most Precious Resource (Ch. 8)</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>9-Dec</td>
<td>Final Exam</td>
<td></td>
</tr>
</tbody>
</table>