

# CHEM 1414 – General Chemistry for Engineers

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## Instructor

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**Discussion Board:** For all questions and comments related to class assignments.

For private question or concerns, please contacted me by email using the inbox in Canvas and please include **CHEM 1414 Online** in the subject line.

## Wellness Statement

**You are important to me.** If at any time you feel that you need to talk or that there is something you are unable to manage about this class, please see me. We can discuss your struggles, and if you need additional help I can refer you to the appropriate service. You are a valuable member of the OSU community. Do not let your physical or mental health suffer because of this class or anything else you might encounter during your time here at OSU. ***You got this!***

## Description

***This is an online course.*** All lectures, resources, assignments, and correspondence are accessed entirely online through Canvas at canvas.okstate.edu. You must use your campus email and password to access the course.

***CHEM 1414*** is a terminal, one-semester general chemistry course for engineers covering the general principles of thermodynamics, atomic structure, solid state, materials, equilibria, acids and bases, and electrochemistry.

## Prerequisites

MATH 1483 or MATH 1513 or the equivalent or acceptable AP credit.

## Goals

- Introduce students to structure and bonding, thermodynamics, equilibria, nomenclature, use, properties, and reactivity of materials. This will allow students to recognize the role of the chemistry in many areas of engineering and technology.

- Develop students' problem solving, critical thinking, information processing, and data interpretation skills which are essential for careers related to health, agriculture, science, engineering and technology

## Textbook

*Chemistry for Engineering Students* (4th Edition) by Brown and Holme **REQUIRED** - Prior Editions are Acceptable

## Instructor Response Time

The instructor will respond to all student inquiries *generally* within 48 hours. Assignments and exam grades will be posted in Canvas within 2 weeks of the assignment/exam due date.

## Participation Expectations

During this online course, students are expected to engage in the material on a regular basis. I expect all students to watch the videos, as this is the lecture portion of the class that provide the information necessary to be successful in this course.

## Grading Policy

Your grade in this course will be calculated according to the completion of the following assignments:

Assignment:	Value in Points	Percentage of Total Grade
Quizzes	40 (2 total at 20 points each)	9.0%
Exams	200 (2 total at 100 points each)	45.5%
Final Exam	200	45.5%
<b>Total</b>	<b>440</b>	<b>100%</b>

Final grades will be assigned according to the following standard scale:

Grade	Percentage Earned
A	85 – 100%
B	75 – 84%
C	60 – 74%
F	0 – 59%

## Assignment Descriptions

The course will be conducted within Canvas and posted in weekly modules. Weekly lecture videos, reading assignments, quizzes and suggested homework will be posted in each module. Important information, updates and reminders will be posted in the Canvas class website. Please check in regularly for information.

## **Examinations:**

Two one-hour exams and a Final exam. **No** make-up exams are available. Hour exams and Final exam will be taken as a timed-multiple choice exam in Canvas.

## **Quizzes:**

There are 2 quizzes that will be completed in Canvas. Assignments and due dates will be listed in the class schedule and Canvas module.

## **Best Practices for Success in this Course**

- Read all appropriate text material and announcements.
- Watch all lecture and exam review videos.
- Write additional notes on the provided lecture notes.
- Rewrite information learned from lecture videos and text readings into a separate notebook.
- Transcribed notes should be in clear outline form, with examples.
- Work all suggested homework problems.
- Review notes at least twice a week.
- Study in small groups or pairs virtually. Ask questions and get help in virtual office hours.
- Keep up with the material covered in class -**don't get behind.**

## **Technical Requirements**

Material in this class is designed to be platform-friendly: any desktop or laptop computer equipped with a modern internet browser such as Chrome and Firefox will be sufficient to fulfill the requirements of the course. We will be using a Canvas Videoconference for virtual office hours, but no personal account is required to join the Videoconference. In order to get the maximum benefit from the virtual office hours, a computer equipped with a microphone and webcam is highly recommended.

## **Netiquette**

A melding of the words "network" and "etiquette," netiquette refers to the manner in which communication is conveyed in an electronic environment. Here are some guidelines for communication within this course:

- Please address me as Dr. Nelson or Prof. Nelson.
- REFRAIN FROM USING ALL CAPS. It is considered SHOUTING when communicating online.
- Do not post or forward offensive or racially insensitive jokes or comments.
- Be careful with humor and sarcasm.
- Don't respond to personal attacks: Contact the instructor for action and referral.
- Always add in the subject line a concise statement describing the email or discussion post.
- Respect others' opinions. If you disagree with what another has said, post your thoughts in an objective, respectful manner. Do not make remarks that can be taken personally.
- Reflect upon the text you have entered before posting.

- Keep the discussion within the scope of the course material except in non-course related discussion boards. Example name: Watercooler.
- Communication should be grammatically correct. Adhere to correct sentence structure, grammar, and spelling conventions. Proofread for errors before posting a message.
- Before you respond to a threaded message, read all the messages related to that message that have been previously posted.
- Send out an email to a group using the blind carbon copy field – BCC does not allow your recipients to view who received the email.

## Course Schedule

Week of	LECTURE	Assignments Schedule (Beijing Day/Date)
June 8	Chapter 1: Introduction to Chemistry Chapter 2: Atoms and Molecules	
June 15	Chapter 3: Molecules, Moles, and Chemical Equations Chapter 4: Stoichiometry <b>Exam 1 Review</b>	<b>Online Quiz 1:</b> Due: Wednesday, 6/17
June 22	<b>Exam # 1 - (Ch. 1, 2, 3, 4)</b> Chapter 5: Gases	<b>Exam # 1</b> <b>Wednesday, 6/24</b>
June 29	Chapter 6: Periodic Table and Atomic Structure Chapter 7: Chemical Bonding and Molecular Structures	
July 6	Chapter 9: Energy and Chemistry Chapter 10: Thermodynamics and the Direction of Change <b>Exam 2 Review</b>	<b>Online Quiz 2:</b> Due: Wednesday, 7/8
July 13	<b>Exam # 2 - (Ch. 5, 6, 7, 9 10)</b> Chapter 11: Chemical Kinetics	<b>Exam # 2</b> <b>Wednesday, 7/15</b>
July 20	Chapter 12: Chemical Equilibrium Chapter 13: Electrochemistry	
July 27	<b>Final Exam Review</b> <b>Final Exam - (Ch. 11, 12, 13)</b>	<b>Final Exam</b> <b>TBA</b>

## University Syllabus Attachment

You will find this semester's syllabus attachment through the following link:

<https://academicaffairs.okstate.edu/sites/default/files/Summer%202020%20Syllabus%20Attachment.pdf>