



Division of Natural Sciences and Horticulture

Department of Chemistry

<http://learning.hccs.edu/programs/chemistry>

CHEM 1412: General Chemistry II | Lecture | #18758

Spring 2021 | 16 Weeks (01.19.2021 - 05.16.2021)

In-Person | West Houston Institute, Rm 302 | M & W 11- 1:50PM

6-contact hour/4 credit hour class | 96 hours per semester

Instructor Contact Information

Instructor:	Adetoun Oyinlola, PH.D.	Office Phone:	713-718-6758
Office:	WHI Campus	Office Hours:	By Appointment.
HCC Email:	adetoun.oyinlola@hccs.edu	Office Location:	WHI- Faculty Area

Please feel free to contact me concerning any problems that you are experiencing in this course. Your performance in my class is very important to me. I am available to hear your concerns and just to discuss course topics.

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I will respond to emails within 24 hours Monday through Friday; I will reply to weekend messages on Monday mornings.

My Personal Welcome

Welcome to General Chemistry II—I am delighted that you have chosen this course. One of my passions is to inspire students' creativity, develop their critical thinking ability and prepare them for the complex world they will face after stepping off campus. I can hardly wait to pass that on. I will present the information in the most exciting way I know, so that you can grasp the concepts and apply them now and hopefully throughout your life. As you read and wrestle with new ideas and facts that may challenge you, I am available to support you. The fastest way to reach me is by my HCC email. The best way to really discuss issues is in person and I'm available during posted office hours to tackle any questions you might have. My goal is for you to walk out of the course with a better understanding of yourself and of human behavior. So please visit me or contact me whenever you have a question.

Prerequisites and/or Co-Requisites

This course requires college-level reading and writing skills. Research indicates that you are most likely to succeed if you have already taken prerequisites to the course. They are CHEM 1411; must be placed into college-level reading (or take GUST 0342 as a co-requisite) and be placed into MATH 0312 (or higher) and be placed into college-level writing (or take ENGL 0310/0349 as a co-requisite).

Please carefully read and consider the repeater policy in the [HCCS Student Handbook](#).

HCCS Open Lab locations may be used to access the Internet and Eagle Online Canvas. It is recommended that you **USE FIREFOX OR CHROME AS YOUR BROWSER**.

Students will be presented with lecture content online, for which they are responsible for studying. The instructor will be available to answer questions and supplement online content upon student request. Additionally, lecture material will be reinforced at the in-person laboratories. On canvas, course notes and lecture videos along with practice exams will be available.

Canvas: Eagle Online Canvas <https://eagleonline.hccs.edu/login/Idap>. Log in directions for Eagle Online appear on the page itself. Your username is your 'W' number used for registration purposes. For technical issues, please call 713-718-2000.

It is the students's responsibility to log onto Eagle Online on a regular basis (at least 2x/week) to check for announcements, access course materials, and check email. This is also considered by the college a form of attendance as well as participation in the course. Additionally, students should confirm their correct email address is linked to eagle Online so that they may send and receive correspondence from their instructor.

HCC Online Information and Policies

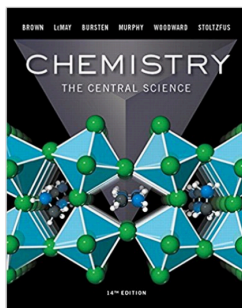
Here is the link to information about HCC Online classes including the required Online Orientation for all fully online classes: <http://www.hccs.edu/online/>

Scoring Rubrics, Sample Assignments, etc.

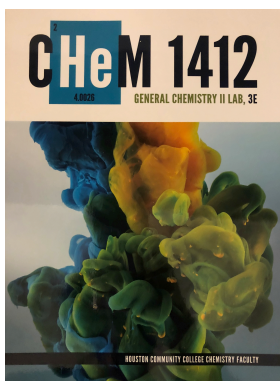
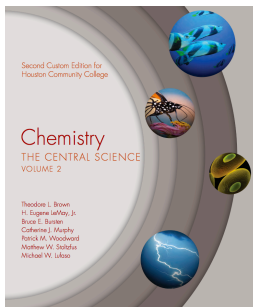
Look in Eagle Online Canvas for the scoring rubrics for assignments, samples of class assignments, and other information to assist you in the course. <https://eagleonline.hccs.edu/login/Idap>

Instructional Materials

Textbook and Course Materials Information



OR



The materials listed below are **required** for this course.

1. Brown, LeMay Jr, Bersten, Murphy, Woodward, Stoltzfus. (2015). *Chemistry : The Central Science*, 14th ed., Pearson, MN.

Either hardcover that contains BOTH volumes I and II (for General Chemistry I and II) ISBN: 978-0-13-441423-2

OR

Softcover Volume II for CHEM 1412 only
ISBN: 978-1-323-85027-5

The texts are included in a package that contains the text as well as an access code and are found at the [HCC Bookstore](#). You may either use a hard copy of the book, or rent the e-book from Pearson. Order your book here: [HCC Bookstore](#)

2. *CHEM 1412 General Chemistry II Lab Manual* 3rd Edition. by HCC Chemistry Faculty; Blue Door Publishing (2018) ISBN-13: 978-1-68135-812-3

3. A Nonprogrammable scientific calculator (no graphing calculators permitted in testing)

4. Lab Coat

Other Instructional Resources

Tutoring

HCC provides free, confidential, and convenient academic support to HCC students in an online environment and on campus. Tutoring is provided by HCC personnel in order to ensure that it is contextual and appropriate. Visit the [HCC Tutoring Services](#) website for details.

Libraries

The HCC Library System consists of 9 libraries and 6 Electronic Resource Centers (ERCs) that are inviting places to study and collaborate on projects. Librarians are available both at the

libraries and online to show you how to locate and use the resources you need. The libraries maintain a large selection of electronic resources as well as collections of books, magazines, newspapers, and audiovisual materials. The portal to all libraries' resources and services is the HCCS library web page at <http://library.hccs.edu>.

Supplementary Instruction

Supplemental Instruction is an academic enrichment and support program that uses peer-assisted study sessions to improve student retention and success in historically difficult courses. Peer Support is provided by students who have already succeeded in completion of the specified course, and who earned a grade of A or B. Find details at <http://www.hccs.edu/resources-for/current-students/supplemental-instruction/>.

Course Overview for CHEM 1412

This course is intended for students majoring in one of the physical sciences or life sciences, engineering, or for students who are pursuing pre-professional programs in medicine, dentistry, pharmacy, veterinary medicine, or other health programs. The course is also beneficial to students who are preparing themselves for higher level science courses in their respective curricula.

Continuation of CHEM 1411 (1311/1111). Topics include solutions, chemical kinetics, equilibrium and equilibrium phenomena in aqueous solution, acids and bases, pH, thermodynamics, electrochemistry, nuclear chemistry, organic chemistry, and biochemistry. This course satisfies the Life and Physical Sciences or Component Area Option of the HCC core.

Core Curriculum Learning Objectives (CCLOs) for all CHEM Core Courses

CHEM 1412 satisfies the chemistry requirement in the HCCS core curriculum. The HCCS Chemistry Discipline Committee has specified that the course address the following core objectives:

1. Demonstrates basic mastery of chemistry by writing formula and equations for chemical reactions, performing chemical calculations and recognizing the application of chemistry in our daily lives.
2. Demonstrates a mastery of introductory and immediate level chemistry to promote success in higher level chemistry and other science programs in four year universities.
3. Demonstrate a mastery of General and Organic Chemistry in preparation for allied and professional health programs and engineering
4. Conduct laboratory experiments by making measurements, performing chemical reactions and analyzing the results in a group or individual setting.

Program Student Learning Outcomes (PSLOs) for all CHEM Courses

Can be found at <http://learning.hccs.edu/programs/chemistry>

Course Student Learning Outcomes (CSLOs) for CHEM 1412

SLO 1. Distinguish between the different ways of measuring concentrations of solutions, and relate concentration to the colligative properties of solutions.

SLO 2. Determine and analyze the rates of chemical reactions.

SLO 3. Write equilibrium constant expressions for chemical reactions and calculate the value of the equilibrium constant and the concentration of reactants and products at equilibrium.

SLO 4. Demonstrate proficiency in acid-base and solubility product calculations.

SLO 5. Express the three laws of thermodynamics and interrelate the enthalpy, free energy and equilibrium constant for the reaction.

SLO 6. Based on the principles of oxidation and reduction, balance oxidation-reduction reactions, calculate cell potentials of voltaic cells based on oxidation-reduction reactions, and make quantitative calculations based on electrolysis.

SLO 7. Identify modes of radioactive decay, balance nuclear reactions, calculate energy changes associated with nuclear reactions, and relate quantities of radioactive elements with time based on the kinetics of nuclear processes.

SLO 8. Classify, name, and draw the structure of basic organic compounds; student can write chemical reactions of alkanes, alkenes, and alkynes.

Learning Objectives for each CSLO can be found at [Learning Objectives for CHEM 1412](#).

Student Success in CHEM 1412

Expect to spend at least twice as many hours per week outside of class as you do in class studying the course content. Additional time will be required for written assignments. The assignments provided will help you use your study hours wisely. Successful completion of this course requires a combination of the following:

- Reading the textbook
- Attending class in person and/or online
- Completing assignments
- Participating in class activities

There is no short cut for success in this course; it requires reading (and probably re-reading) and studying the material using the course objectives as your guide.

Instructor and Student Responsibilities

As your Instructor, it is my responsibility to:

- Provide the grading scale and detailed grading formula explaining how student grades are to be derived
- Facilitate an effective learning environment through class activities, discussions, and lectures
- Provide a description of any special projects or assignments
- Inform students of policies such as attendance, withdrawal, tardiness and make up

- Provide the course outline and class calendar which will include a description of any special projects or assignments
- Arrange to meet with individual students before and after class as required

To be successful in this class, it is the student's responsibility to:

- Attend "online" class and participate in class discussions and activities
- Read and comprehend the textbook and instructor notes
- Complete the required assignments and exams
- Practice problems
- Ask for help in a timely manner when there is a question or problem
- Keep copies of all paperwork, including this syllabus, handouts, and all assignments
- Keep up with your grades which will be posted in the Canvas Gradebook
- Attain a raw score of at least 70% on all assignments
- Take the final exam during the designated testing period
- Be aware of and comply with academic honesty policies in the [HCCS Student Handbook](#)

Assignments, Exams, and Activities

Exams

*There are 4 regular exams scheduled. The lowest regular exam will be dropped.

** The exams are mandatory

*** Final Exam is mandatory and **cannot** be dropped.

Letter grade determination is based on the 10-point grading scale:

90 - 100 A

80 - 89 B

70 - 79 C

60 - 69 D

< 60 F, FX

*FX is a grade assigned to students who attend partially but do not complete the course or fail to withdraw and still appear on the final grade roster and whose resulting average is below 60. This is a new HCC policy and the grade assignment of FX is subject to the instructor's discretion. The four regular exams consist of 2 sections, Part A-multiple choice of 30 questions, each one is 2 points totaling 60 points and Part B- show your work section of 5 questions, each question is 8 points totaling 40 points. HCC does not provide students with Scranton forms. They are sold in campus bookstores.

Written Assignments

Laboratories Quizzes/Reports:

Each student should arrive at the lab on time, with his or her lab manual and come prepared. A 'Lab Supplement' has also been curated for you to help guide you through each lab. It is highly recommended that you reference that for preparation for lab and during lab as well completion of your lab report.

You will complete 8 labs in the course for a grade, all located in your lab manual, worth 10 points each. There will be a short prelab quiz prior to each lab with the exception of the paper lab on organic chemistry, which will be posted on Canvas. There are NO make up quizzes so please be on time and in regular attendance.

Each lab report must be completed individually, particularly dry labs- no copying. If you need help, I am here to help you so there is support, but you must acquire it right way. Students found to be copying or engaging in academic dishonesty on quizzes or reports will face penalties described in that section of the syllabus.

CHEM 1412 Departmental Final Exam

All students will be required to take a comprehensive departmental final exam. You will need a scantron for the final. All other written material will be provided to you.

The departmental final exam consists of 35 multiple -choice and 6 short answer questions. Students must provide their own Scantron forms (FORM NUMBER 882-E-LOVAS). All the information students need to prepare for the exam is in the [Final Exam Handbook](#).

Students who are absent from the final exam without discussing their absence with the instructor in advance or within 24 hours afterward will receive a course grade of Incomplete. Any student who does not take a makeup exam by the end of the following long semester will receive a final exam grade of zero and a course grade of F.

Grading Formula

The overall course average is determined as follows:

Three regular exams	60%
Departmental Final	20%
Lab Average	20%

Grade	Total Points
A	900+
B	800-899
C	700-799
D	600-699
F	<600

HCC Grading Scale can be found on this site under Academic Information:
<http://www.hccs.edu/resources-for/current-students/student-handbook/>

Course Calendar

Week #	Date	Lab Activity	Lecture
1	1/20	Introduction	Chapter 13
2	1/25	Safety Lab & Molarity, Dilution, Soln LAB	Chapter 14
3	2/1	Boiling pt elevation (substituted for freezing pt depression)	Chapter 15
4	2/8	Kinetics: Iodine clock Rxn	EXAM 1 (CH. 13-15)
5	2/15	Le Chatelier: Chemical eq. lab, Clock rxn lab due	Chapter 16
6	2/22	Titration of Acids & bases	Chapter 16, 17
7	3/1		Exam 2 (CH 16-17)
8	3/8		Chapter 19
	SPRING BREAK	SPRING BREAK	SPRING BREAK
9	3/22	Hydrolysis of salts & pH of buffer solns	Chapter 20

Week #	Date	Lab Activity	Lecture
10	3/29	Dtm of Ka of Weak Acid	Chapter 21
11	4/5		Chapter 24
12	4/12		Exam 3 (CH 19, 21 & 24)
13	4/19	Electrochemical Cells and thermodynamics Lab	
14	4/26	Make Up Lab	
15	5/3		REVISION
16	5/10		FINAL EXAM

Syllabus Modifications

The instructor reserves the right to modify the syllabus at any time during the semester and will promptly notify students in writing, typically by e-mail, of any such changes.

Instructor's Practices and Procedures

Missed Assignments

Students are responsible to turn in any missed assignments other than the departmental final exam. Students should also note that a make-up exam is not a retake. That is, make-up exams are allowed only for missed exams.

Academic Integrity

Academic dishonesty, which includes but is not limited to, plagiarism, copying, sharing exam information or communicating during an exam, or using unauthorized electronic devices during exams, will not be tolerated. Penalties can include a grade of "0" or "F" on the particular assignment or disciplinary action as determined by rules of the college and are subject to the discretion and judgment of the instructor. You are expected to be familiar with the University's Policy on Academic Honesty, found in the catalog. What that means is: If you are charged with an offense, pleading ignorance of the rules will not help you. Students are responsible for conducting themselves with honor and integrity in fulfilling course requirements. Penalties and/or disciplinary

proceedings may be initiated by College System officials against a student accused of scholastic dishonesty. "Scholastic dishonesty": includes, but is not limited to, cheating on a test, plagiarism, and collusion. There is a **Zero tolerance** for any type of academic dishonesty. Please see the following link for further information:

[Student Handbook](#)

Specify the consequences for cheating, plagiarism, collusion, etc. Consider including the following statement: Scholastic Dishonesty will result in a referral to the Dean of Student Services. See the link below for details.

Here's the link to the HCC information about academic integrity (Scholastic Dishonesty and Violation of Academic Scholastic Dishonesty and Grievance):

<http://www.hccs.edu/about-hcc/procedures/student-rights-policies--procedures/student-procedures/>

Attendance Procedures

Class attendance is a must, that means students are expected to come in for all lectures. If a student does not show up in class, he/she will be marked absent regardless of any excused presented.

Student Conduct

Students are expected to maintain cordial and professional conduct as would be expected of an academic environment and as laid out in the Student Handbook. Please be considerate in your correspondence with the instructor and/ or any classmates as well as any in person interaction.

Please arrive and leave also on time so as to raise little disruption and avoid missing important class information and/or assignments.

Electronic Devices

No electronic device is allowed in the classroom during lecture time.

The use of electronic devices by students in the classroom is up to the discretion of the instructor. Any use of such devices for purposes other than student learning is strictly prohibited. If an instructor perceives such use as disruptive and/or inappropriate, the instructor has the right to terminate such use. If the behavior continues, the student may be subject to disciplinary action to include removal from the classroom or referral to the dean of student services...

Per the HCCS

Cell phone or electronic device use in class is NOT PERMITTED, particularly during testing/labs. It is understandable that a need arises to tend to personal or urgent matters, but that should not be habitual nor disruptive. A student may

excuse themselves from class to tend to a pressing matter. However, cell phone use is otherwise not permitted in class.

No communication or photographs may be taken during class either, of persons or course material (ie exams, keys, quizzes, etc.) using a device and no testing material may be removed from the class at any time.

If students choose to use laptops or tablets (or other electronic device with wifi, cellular or communication capabilities including cell phones and watches), they should be for classroom- related purposes only and during times permitted.

Chemistry Program Information

Please visit the chemistry program page for more about our degree offering, requirements, employment prospects and more. <http://learning.hccs.edu/programs/chemistry>

Add program-specific information such as the following:

- Chemistry Majors
- Careers in chemistry
- HCC chemistry student organizations
- Chemistry Scholarships

Provide details for each or include links to the information

HCC Policies

Here's the link to the HCC Student Handbook <http://www.hccs.edu/resources-for/current-students/student-handbook/> In it you will find information about the following:

Academic Information	Incomplete Grades
Academic Support	International Student Services
Attendance, Repeating Courses, and Withdrawal	Health Awareness
Career Planning and Job Search	Libraries/Bookstore
Childcare	Police Services & Campus Safety
disAbility Support Services	Student Life at HCC
Electronic Devices	Student Rights and Responsibilities
Equal Educational Opportunity	Student Services
Financial Aid TV (FATV)	Testing
General Student Complaints	Transfer Planning
Grade of FX	Veteran Services

EGLS³

The EGLS³ ([Evaluation for Greater Learning Student Survey System](#)) will be available for most courses near the end of the term until finals start. This brief survey will give invaluable information to your faculty about their teaching. Results are anonymous and will be available to faculty and division chairs after the end of the term. EGLS³ surveys are only available for the Fall and Spring semesters. -EGLS3 surveys are not offered during the Summer semester due to logistical constraints.

<http://www.hccs.edu/resources-for/current-students/egls3-evaluate-your-professors/>

Campus Carry Link

Here's the link to the HCC information about Campus Carry: <http://www.hccs.edu/departments/police/campus-carry/>

HCC Email Policy

When communicating via email, HCC requires students to communicate only through the HCC email system to protect your privacy. If you have not activated your HCC student email account, you can go [to HCC Eagle ID](#) and activate it now. You may also use Canvas Inbox to communicate.

Housing and Food Assistance for Students

Any student who faces challenges securing their foods or housing and believes this may affect their performance in the course is urged to contact the Dean of Students at their college for support. Furthermore, please notify the professor if you are comfortable in doing so.

This will enable HCC to provide any resources that HCC may possess.

Office of Institutional Equity

Use the link below to access the HCC Office of Institutional Equity, Inclusion, and Engagement (<http://www.hccs.edu/departments/institutional-equity/>)

disAbility Services

HCC strives to make all learning experiences as accessible as possible. If you anticipate or experience academic barriers based on your disability (including mental health, chronic or temporary medical conditions), please meet with a campus Abilities Counselor as soon as possible in order to establish reasonable accommodations. Reasonable accommodations are established through an interactive process between you, your instructor(s) and Ability Services. It is the policy and practice of HCC to create inclusive and accessible learning environments consistent with federal and state law. For more information, please go to <http://www.hccs.edu/support-services/disability-services/>

Title IX

Houston Community College is committed to cultivating an environment free from inappropriate conduct of a sexual or gender-based nature including sex discrimination, sexual assault, sexual harassment, and sexual violence. Sex discrimination includes all forms of sexual and gender-based misconduct and violates an individual's fundamental rights and personal dignity. Title IX prohibits discrimination on the basis of sex-including pregnancy and parental status in educational programs and activities. If you require an accommodation due

to pregnancy please contact an Abilities Services Counselor. The Director of EEO/Compliance is designated as the Title IX Coordinator and Section 504 Coordinator. All inquiries concerning HCC policies, compliance with applicable laws, statutes, and regulations (such as Title VI, Title IX, and Section 504), and complaints may be directed to:

David Cross
Director EEO/Compliance
Office of Institutional Equity & Diversity
3100 Main
(713) 718-8271
Houston, TX 77266-7517 or Institutional.Equity@hccs.edu
<http://www.hccs.edu/departments/institutional-equity/title-ix-know-your-rights/>

Office of the Dean of Students

Contact the office of the Dean of Students to seek assistance in determining the correct complaint procedure to follow or to identify the appropriate academic dean or supervisor for informal resolution of complaints.

<https://www.hccs.edu/about-hcc/procedures/student-rights-policies--procedures/student-complaints/speak-with-the-dean-of-students/>

Department Chair Contact Information

Chemistry Department Chair

If you have questions or concerns about the course, please see your instructor. Should you wish to contact the department chair, below is his information:

Dr. Emmanuel Ewane, emmanuel.ewane@hccs.edu; 713-718-5414

