



Division of Natural Sciences and Geology

Department of Chemistry

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

CHEM 1111: General Chemistry I | Lab | #XXXXX

Spring 2020 | 16 Weeks (1.21.2020-5.1.2020)

In-Person | West Houston Institute 306 TU 6:00pm-8:50pm

1-hour Lab course | 48 hours per semester

Instructor Contact Information

Instructor: Asma Akhter.

Phone: 832-656-8692

Office Hours: Before and after Class

HCC Email: asma.akhter@hccs.edu

Office Location: Faculty Room

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.

Instructor's Preferred Method of Communication

I will respond to emails within 24 hours Monday through Friday; I will reply to weekend messages on Monday mornings. Call me for your emergency needs.

What's Exciting About This Course

You will learn so much application of chemistry in the laboratory format. Topics include a mathematical introduction (metric system, significant figures and scientific notation), discussion of atoms, molecules and ions, stoichiometry, electronic structure, periodic relationships, bonding, molecular geometry and properties of gases, liquids, solids and solutions. Appropriate lab experiments are included

My Personal Welcome

Welcome to General Chemistry__ I am delighted that you have chosen this course. One of my passions is chemistry. I will present the information in the most exciting way I know. I hope that you can grasp the concepts and apply them now and throughout your life. As you read and introduce new ideas

and facts that may challenge you, I am available to support you. My goal is for you to walk out of the course with a better understanding of basic chemistry, contact with me if you need any.

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 and passed Reading 0342, Math 0312 and Writing 0310 / 0349 or Math 0312 with INRW 0420. For this course, additional prerequisites are completion of one year of high school chemistry or CHEM 1305 (Introduction to Chemistry) and MATH 1314 (College Algebra). Other minimum requirements for enrollment in CHEM 1311 include placement in college-level reading (or take INRW 0420). It is also highly recommended to take the corresponding lecture, CHEM 1311 with CHEM 1111. If you have enrolled in this course having satisfied these prerequisites, you have a higher chance of success than students who have not done so. Please carefully read and consider the repeater policy in the Student Handbook.

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

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/ldap>

Instructional Materials

1. Lab manual

Custom Edition for HCC CHEM 1111

Laboratory Experiments
for Chemistry
The Central Science

Available at [HCC Bookstore](#)

2. A Nonprogrammable scientific calculator

3. Lab Coat

Other Instructional Resources

www.pearsoned.com

ISBN-13: ISBN-10:

978-0-136-68805-1 0-136-68805-5

9 780136 688051

90000

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

CHEM 1111 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.

Science and engineering majors study atomic structure, chemical reactions, thermodynamics, electronic configuration, chemical bonding, molecular structure, gases, states of matter, and properties of solutions. The laboratory includes appropriate experiments.

Core Curriculum Learning Outcomes (CCLOs)

The HCCS Chemistry Discipline Committee has specified that the course address the following core objectives:

- Reading/ Writing
- Speaking/Listening
- Critical Thinking
- Computer/Information Literacy

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 1111

SLO1. Learn Proper Safety Practice and Measures in the chemistry laboratory.

SLO2. Practice Basic Lab Techniques of Measurement and Conversion

SLO3: Perform separation of mixtures using proper technique

SLO4: Identify physical properties

SLO5: Observe various chemical reactions and write supporting chemical equations

SLO6: Calculate empirical and molecular formulas and reaction yield

SLO 7: Apply thermochemical principles to evaluate energy relationships based on specific heat, calorimetry, and temperature changes.

SLO 8. Relate the properties of gases with the gas laws and extend the application of these relationships to reaction stoichiometry, gas mixtures, and effusion/diffusion of gases.

SLO1. Learn Proper Safety Practice and Measures in the chemistry laboratory.

SLO2. Practice Basic Lab Techniques of Measurement and Conversion

SLO3: Perform separation of mixtures using proper technique

SLO4: Identify physical properties

SLO5: Observe various chemical reactions and write supporting chemical equations

SLO6: Calculate empirical and molecular formulas and reaction yield

SLO 7: Apply thermochemical principles to evaluate energy relationships based on specific heat, calorimetry, and temperature changes.

SLO 8. Relate the properties of gases with the gas laws and extend the application of these relationships to reaction stoichiometry, gas mixtures, and effusion/diffusion of gases.

SLO 9. Depict chemical bonding with dot structures and valence bond theory and determine the molecular shapes (geometry) of molecules based on VSEPR and valence bond theory.

Learning Objectives for each CSLO can be found at [Learning Objectives for CHEM 1111](#).

Student Success

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

Written Assignment

At least ten (twelve dropped the lowest two reports) written assignment are required as lab reports which include three parts: pre-lab, data sheets (aka report forms), and post-lab reports. The written assignment(s) are clearly linked to the course student learning outcomes and learning objectives. Written assignment(s) are counted as 80% of students' course grade (see Grading Formula below). Please note that sometimes the lab quizzes will be in lieu of lab reports to check student preparation before coming to the lab class.

Exams

There is a mandatory comprehensive final exam for this lab course. The final exam topics are based on all the experiments performed (12 experiments + 1 makeup experiment) including the safety video and the common chemical apparatus in lab. There will be total 100 multiple-choice questions like the questions in the lab reports to be used in the final exam. Data analysis is a must in the test as well as safety video and chemical apparatus. The final will be two hours and students need to bring their own Scantron (Form 882-E), calculator, pencil, and eraser to the final. HCC does not provide students with Scantron forms nor calculators. They are sold in campus bookstores.

In-Class Activities

Students will be performing the experiments in groups: 2 students in a group is preferred; maximum 3 students in a group. The free riders are strongly discouraged. Each student must turn in his/her own lab reports.

Grading Formula

10 lab reports (12 lab reports dropped two lowest grades) 80%
1 comprehensive final exam (100 questions) 20%
Total 100%

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	Name of the experiment	Date
Week 1	Syllabus Exp't 0: Laboratory Safety and Work Instructions (complete quiz online)	01/21/2020
Week 2	Exp't 1: Basic Laboratory Techniques	01/28/2020
Week 3	Exp't 2: Identification of Substances by Physical Properties (Parts A, B & E only)	02/04/2020
Week 4	Exp't 4: Chemical Reactions	02/11/2020

Week 5	Exp't 5: Chemical Formulas (Part B only; for Part A generates hydrogen gas over water bath) Caution: MUST be done in fume hood). Do not inhale the vapor sulfur dioxide.	02/18/2020
Week 6	Exp't 6: Chemical Reactions of Copper and Percent Yield Caution: Highly flammable solvent, acetone, is in use over steam bath:	02/25/2020
Week 7	Chapter 11: Activity Series 9: Molecular geometries of Covalent Molecules: Lewis Structures and the VSEPR Model (it's allowed to complete it at home	03/03/2020
Week 8	Chapter 10: Behavior of Gases: Molar Mass of a Vapor	03/10/2020
Week 9	Chapter 8: Solubility and the Effect of Temperature on Solubility	03/24/2020
Week 10	Chapter 13: Heat of Neutralization	03/31/2020
Week 11	9: Molecular geometries of Covalent Molecules: Lewis Structures and the VSEPR Model (it's allowed to complete it at home	04/07/2020
Week 12	Exp't 3: Separation of the Components of a Mixture Caution: Must be done in the fume hood when REMOVING Ammonium Chloride from mixture. Do not inhale the vapors containing ammonia and hydrogen chloride.	04/14/2020
Week 13	Chapter 12: Reactions in Aqueous Solutions: Metathesis Reactions and Net Ionic Equations	04/21/2020
Week 14	Experiment 13 Molecular geometries of Covalent Molecules: Lewis Structures and the VSEPR Model (it's allowed to complete it at home	04/28/2020

Week 15 → Comprehensive Final Exam review -----→

05/05/2020

Week 16---→ Final exam ---→

05/12/2020

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

Any missing assignment will be replaced by an online assignment. For that case, students must notify instructor by sending an email.

Academic Integrity

You are expected to be familiar with the College's Policy on Academic Honesty, found in the Student Handbook. 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. 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/>

"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.

For further information, please see Student Handbook.

Zero tolerance for academic dishonesty. Student who is caught cheating will receive a grade of zero for that exam or lab report with no exceptions and may be administratively withdrawn from the class. The student will be reported to the College for discipline action. Cell/smart phone or Apple/smart watch use during the test is considered academic dishonesty. Should anyone report you using the smart phone and watch, your test will be automatically credited as zero and will not be replaced by the Departmental Final Exam when calculating the letter grade.

"Plagiarism" includes but not limited to the following conducts, is academic dishonesty and is subjective to discipline action: (a) taking the exam for the other student; taking pictures of any official exam(s) or Scantron(s) (b) changing wrong answers to correct answers posted on Scantron, copying word-for-word for all assignment, typically in the lab reports and research paper and homework, with same mistakes, (c) photocopying or taking pictures of other student's work, especially the lab reports and homework, and then wipe-outing the name, and claim as his/hers, (d) turning in Scantron/exam with version written that does not match the version given and on student sign-in/attendance sheet, (e) forging signatures by signing attendance sheet for another student(s), to name a few.

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/>
CHEM 1111 Final Exam

All students will be required to take a comprehensive departmental final exam given by his/her instructor. This final exam will consist of 100 multiple-choice questions. Students must provide their own Scantron forms (FORM NUMBER 882- E or 882-E-LOVAS). The Final Exam Schedule is NOT allowed to change, and the schedule must be strictly followed according to the College Policy. Should students have questions, please contact Department Chair.

Attendance Procedures

Be specific about In-Person, students can have highest three days unexcused absences including practice regarding withdrawals, never attending, etc.

Student Conduct

Students are expected to demonstrate the academic integrity including coming to class on time, performing the due assignments, preparing for exams, and actively participating in class activities. Do not use cell phones, laptops, or tablets to surf the internet, engage in activities of social media. Treat you fellow classmates and instructor with respect by not talking aloud to interrupt the class.

Instructor's Course-Specific Information (As Needed)

Exam Policy All cell phones must be turned off and all smart watches must be removed from wrist. Leave both cell phones and smart watches in backpacks and leave backpacks in front of the classroom. Should student carry concealed handgun, please keep it close to you in your pocket and be concealed.

No restroom uses after 15 minutes of beginning of the exam unless the student has document on file with the Ability Office. No makeup exams are allowed for any excused and/or unexcused exam. Thus, students who missed the exam(s) can use their System Final Exam to replace their no-show lecture exam. Should students miss two lecture exams, they are advised to drop the class.

Do not take pictures of exams and Scantrons. During or upon returning student Scantron with exam, if student copy or take the pictures of either exam(s) or Scantron(s), the student's exam grade will be credited as Zero. All exams and Scantrons will be collected back and submitted to the chairman's office at the end of semester.

Should makeup exam is granted based on students' excused slits, availability of class/lab room and non- instructional time, the students who took the makeup exam are not allowed to use the System Final Exam to replace their no-show exam.

Should the makeup exam is granted by providing instructor the excuse slit and taken within a week after the scheduled time, the maximum score is 80% of the exam grade earned; within two weeks, 70% of the exam grade earned; within three weeks, 60% of the exam grade earned; after three weeks, no makeup will be granted.

Please bring Scantron (FORM NO. 882-E), pencil, eraser, no-USB-port-equipped calculator and blank scratch paper to each test/exam. Write the version(s) and your name on your Scantron.

Exam Feedback and Tardiness

Students can expect grades and feedback within a week after they submit coursework before the official deadline. For specific exam practices, please see section of Exam Policy. Remember to leave backpack, books, notes, reviews, and cellphones away from the desk but in your backpacks. Turn off phones. No calculation function from the phone is allowed. After 15 minutes, students are not allowed to use restroom.

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

