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Division of Natural Sciences and Geology

Department of Chemistry

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

CHEM 1111: General Chemistry I | Lab | #1111

Fall 2020 | 16 Weeks (08.24.2020-12.13.2020)
Hybrid l Alief – Hayes Campus Tu 7:00pm-: 9:50pm
1-hour Lab course | 48 hours per semester

Instructor Contact Information

Instructor: Asma Akhter
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. For additional needs, you may contact Chemistry Department in Westheimer Hayes.

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.

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Eagle Online Canvas Learning Management System

This course will use (Eagle Online Canvas (https://eagleonline.hccs.edu) **will use** Eagle Online Canvas (https://eagleonline.hccs.edu) **to supplement in-class assignments, exams, and activities. We will start our class in Canvas, and then shift to face to face followed by HCC policy. Canvas meeting time will be EVERY TUESDAY from 6:00PM TO 7:00PM. I will recommend you follow the Canvas Inbox during the Canvas Class Time. Also check your Canvas class every week to follow the class. It will be posted in different modules in timely manner. Notification will be sending through Canvas also. 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. We will use Cisco WebEx for our virtual class.**

HCC Online Information and Policies

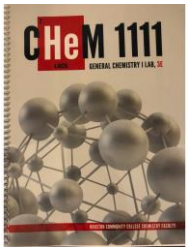
Here is the link to information about HCC Online classes including the required Online Orientation for all fully online classes: http://www.hccs.edu/online/

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

Lab manual



Available at HCC Bookstore

CHEM 1111 General Chemistry I **3nd Edition. by HCC Chemistry Faculty; Blue Door Publishing (2018) ISBN-13: 978-1-68135-811-6**

2. A Nonprogrammable scientific

3. Lab Coat

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, caloriometry, 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.
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SLO 7: Apply thermochemical principles to evaluate energy relationships based on specific heat, caloriometry, 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

<u>As your Instructor, it is my responsibility to</u>:

- **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**

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

- **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 <u>HCCS Student Handbook</u>**
- **Late assignment is not acceptable.**

Assignments, Exams, and Activities

Written Assignment

You are required to turn in formal lab report of one of your labs. One lab report, students should use Scientific method to make this lab report. Steps to follow1. Question 2. Background research 3. Hypothesis. 4. Procedure including evidence (data table and graph) 5. Analysis and 6. Conclusion. I will provide specific guideline for your lab report. At least one written assignment is required. The written assignment(s) should be clearly linked to the course student learning outcomes and learning objectives. Written assignment(s) must count at least 15% of students' course grades (see Grading Formula below). Lab report- 15%

Exams

You will have a midterm and a final exam for this course. Each exam will have 40 to 50 multiple choice questions and it will be timed tests. Lockdown browser will need to take any type of exam. Students are required to buy webcam from the HCC bookstore for their test taking part. Each exam will cover 15% from their 100% grading calculation. Total will be 30% for their exams. You will have only one attempt to take these two exams. Exam will be uploaded in Canvas; you do not have to buy any Scantron for exam taking.

In-Class Activities

We will have discussion topic, lab Manuel concern, midterm, final exam, and lab report in our in-class activities. You may choose to include in-class activities. You have 5%grade to actively participate in our class. Your attendance is counting for this extra points. For each assigned lab, students are required to turn in prelab, post lab, and report form to receive their 50% grade.

Grading Formula

Written Assignment(s) 15%
Midterm 15%
Final Exam 15%
Lab report from book- 50%
Class participation 5%

Total 100%

Grading Rubric
(90-100) %---→ A
(80-89) %-----> B
(70-79) %---- → C
(60-69) %----→ D
<60%---------→ F

HCC Grading Scale can be found on this site under Academic Information:

http://www.hccs.edu/resources-for/current-students/student-handbook/

Schedule

Week	Name of the Experiment	Date
One	Syllabus Exp't 0: Laboratory Safety and Work Instructions (complete quiz online)	08/25/2020
Two	Exp't 1: Basic Laboratory Techniques	09/01/2020

Three	**Exp't 2: Separation of the components of a mixture**	**09/08/2020**
Four	**Exp't 3: Identification of substance by physical properties**	**09/15/2020**
Five	**Exp't 4: Chemical Formulas** **Exp't 5: Moles and Chemical Formulas**	**09/22/2020**
Six	**Exp't 5: Moles and Chemical Formulas**	**09/29/2020**
Seven	**Exp't 7: Chemical Reactions of Copper and Percent Yield Caution: Highly flammable solvent, acetone, is in use over steam bath:**	**10/06/2020**
Eight	**Midterm week**	**10/13/2020**
Nine	**Exp't 8: Activity Series**	**10/20/2020**
Ten	**Exp't 12: Chapter 13: Heat of Neutralization**	**10/27/2020**
Eleven	**Study week**	**11/03/2020**
Twelve	**Exp't 11: Chapter 10: Behavior of Gases: Molar Mass of a Vapor**	**11/10/2020**
Thirteen	**Exp't 9: Chapter 12: Reactions in Aqueous Solutions:Metathesis Reactions and Net Ionic Equations**	**11/17/2020**
Fourteen	**Experiment 13 Molecular geometries of Covalent Molecules: Lewis Structures and the VSEPR Model (it's allowed to complete it at home**	**11/24/2020 Thanksgiving break No class meeting**
Fifteen	**Comprehensive final exam review**	**12/01/2020**
Sixteen	**Final Exam**	**12/08/2020**
Notes	**The instructor deserves to change the syllabus in any time, and an email will be sending**	**Anytime**

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

If you miss or forget to turn in your assignment in on time, you will need to contact with me through canvas inbox for further instruction. There will be no makeup unless you have some emergency, and emergency is acceptable for once. If you miss any exam, you need to contact with me immediately. There is no make up for

final exam. We will use lock down browser and web cam for all exams and quizzes. Late lab report is not acceptable because normally it has one-week widow.

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. "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. Here is 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

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)

Due to the Covid-19, we will start our class in Canvas using Cisco WebEx, and move to face to face with HCC decision. Our exams will be in Canvas with active using of Lock Down Browser. You are required to submit your lab report through Canvas assignments whether we are in Virtual or in person Class. Our Virtual class meeting time is going to be 6:00pm – 7:00pm. *DO NOT MISS YOUR FIRST DAY CLASS MEETING.*

Electronic Devices

You are not allowed to use any kind of electronic device during Testing Time.

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 EGLS^3 (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. EGLS^3 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