



**Division of Natural Sciences and Horticulture**

**Department of Chemistry**

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

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**CHEM 1105: Introduction to Chemistry Laboratory | Lab | #15435**

Spring 2021 | 16 Weeks (1.19.2021-5.16.2021)

In-Person | Missouri City Campus Rm 202 | M 11AM-1:50PM

1-hour Lab course | 48 hours per semester

**Instructor Contact Information**

Instructor: Laura Jakubowski, Ph.D.  
HCC Email: [laura.jakubowski@hccs.edu](mailto:laura.jakubowski@hccs.edu)

Office Hours: by appointment  
Office Location: Missouri City Campus

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.

**What's Exciting About This Course**

Most everything you do and encounter during your day involves chemistry. Making coffee, cooking eggs, and toasting bread involve chemistry. The products you use—like soap and shampoo, the fabrics you wear, the electronics that keep you connected to your world, the gasoline that propels your car—all of these and more involve chemical substances and processes. Whether you are aware or not, chemistry is part of your everyday world. In this course, you will learn many of the essential principles underlying the chemistry of modern-day life.

**My Personal Welcome**

Welcome to Introduction to Chemistry Lab — I'm delighted that you have chosen this course. One of my passions is understanding how materials in our everyday world work at the atomic level. I can hardly wait to pass that on. I will present the information in the most exciting way I know. As you read and wrestle with new ideas and facts that may challenge you, I am available to support you. The best way to reach me is by my HCC email. My goal is for you to walk out of the course with a better understanding of chemistry. So please 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 and passed Reading 0342, Math 0312 and Writing 0310 / 0349 or Math 0312 with INRW 0420. The Math component may not be an official prerequisite, but it will be very helpful in your success as this course does have very similar math components to chemistry courses (CHEM 1311) that require Math 0312.

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

## Eagle Online Canvas Learning Management System

This course will use [Eagle Online Canvas](https://eagleonline.hccs.edu) (<https://eagleonline.hccs.edu>) to supplement the in-class lab assignments, and list your grade in the course. 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**.

### *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. CHEM 1105 Laboratory Assignments will be available through the course Canvas page
2. A nonprogrammable scientific calculator
3. (recommended) Safety goggles and a 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**

CHEM 1105 gives a general introduction to a chemistry lab. Laboratory experiments are designed for hands-on chemistry activities with real life applications, including units of measurements, physical and chemical properties of substances, chemical stoichiometry, chemical reactions, chemical calculations, chemical bonding, and molecular structure. Core curriculum course. Designed for non-science and allied health students.

### **Core Curriculum Student 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 1105**

- SLO 1. Give names and formulas of elements, ions, and ionic and molecular compounds.
- SLO 2. Categorize, complete, and balance chemical reactions.
- SLO 3. Classify elements according to their location in the periodic table; identify periodic trends of selected properties of atoms; write the electron configuration of atoms and ions.
- SLO 4. Do basic chemistry calculations involving reaction stoichiometry.
- SLO 5. Relate the gas variables using the gas laws and apply Dalton's law of partial pressures to a mixture of gases.
- SLO 6. Depict chemical bonding with dot structures and predict the molecular shape (geometry) of molecules.
- SLO 7: Calculate density and relate the value to mass and volume measurements for all physical states.
- SLO 8: Measurements and conversions in Metric, SI, and American systems

SLO 9: Apply thermochemical principles to evaluate work, heat, and energy relationships based on specific heat and temperature changes.

## 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 course materials
- 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 class and participate in class discussions and activities
- Read and comprehend the textbook and instructor notes
- Complete the required assignments
- 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
- Be aware of and comply with academic honesty policies in the HCCS Student Handbook

## Laboratory Assignments

There will be a total of 11 laboratory assignments that we will be performing during this course. In addition to the laboratory report form, the labs have pre-lab and post-lab questions as well. ALL components of every lab MUST be completed to get full credit. At the end of the semester, your lowest laboratory assignment grade will be dropped.

## Grading Formula

10 (out of 11) Laboratory Assignments

100%

Grade	Total Points
A	100 - 90
B	89 - 80
C	79 - 70
D	69 - 60
F	59 and below

*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	Topic
1	1/25	Introduction and Lab Safety
2	2/1	Laboratory Assignment 1 - Basic Math Skills
3	2/8	Laboratory Assignment 2 - Measurements
4	2/15	<i>NO LAB - PRESIDENT'S DAY</i>
5	2/22	Laboratory Assignment 3 - Density Calculations
6	3/1	Laboratory Assignment 4 - Separation of a Mixture
7	3/8	Laboratory Assignment 5 - The Periodic Table
8	3/15	<i>NO LAB - SPRING BREAK</i>
9	3/22	Laboratory Assignment 6 - Empirical Formula
10	3/29	Laboratory Assignment 7 - Double Replacement Reactions
11	4/5	Laboratory Assignment 8 - Stoichiometry
12	4/12	Laboratory Assignment 9 - The Ideal Gas Law
13	4/19	Laboratory Assignment 10 - Lewis Structures
14	4/26	Laboratory Assignment 11 - Percent Water in a Hydrate
15	5/3	<i>(possible lab make-up day)</i>
16	5/10	<b>NO FINAL EXAM</b>

### *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*

Please make every effort to come to lab (on time!). I understand that it may happen for some to miss lab time. In this case, there will be a date at the end of the semester for you to come and make up whatever lab you missed. NOTE - lab, not labs. You may only make up ONE lab. Any other labs that you miss will result in a grade of 0 for the lab!!

### *Academic Integrity*

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.

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***

It is expected for you to be present and on time each week. This course only meets 11 times, so even one absence can affect your average (see missed assignments above). It is also VERY important to be ON TIME. Some labs involve working with hazardous substances, and it is important to be present at the beginning of lab time to hear about any safety precautions.

### ***Student Conduct***

No food or drink will be allowed in the lab!!! Please step into the hallway to eat or drink anything (with washed hands if coming from lab), and have all food and drink items put away while in the lab. Proper attire is also important. For safety reasons, no baggy clothing or open-toed shoes are allowed, and long hair must be tied back. Finally, no goofing around in the lab will be permitted - as it may lead to serious accidents. Any such behavior will result in that student's removal from the lab, and a grade of 0 for that day.

### ***Electronic Devices***

Cell phones will not be permitted while I am lecturing, and while a lab is actively being conducted. I will remind you to put your phones away at these times.

## 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

### ***EGLS<sup>3</sup>***

The EGLS<sup>3</sup> (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<sup>3</sup> 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](mailto: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](mailto:emmanuel.ewane@hccs.edu); 713-718-5414**