

General Chem Lab I-22147

CHEM-1111

RT 2022 Section 107 1 Credits 08/23/2021 to 12/12/2021 Modified 08/20/2021

Course Meetings

Course Modality

Online Anytime

Meeting Days

NA

Meeting Times

NA

Meeting Location

Online



Welcome and Instructor Information

Instructor: Dr Gomathi Ramanoudjame

Email: gomathi.ramanoudjame@hccs.edu

What's Exciting About This Course

This course is exciting because...

Chemistry is everywhere in the world around you! It's in the food you eat, clothes you wear, water you drink, medicines, air, cleaners... you name it. Chemistry sometimes is called the "central science" because it connects other sciences to each other, such as biology, physics, geology, and environmental science. Here are some of the best reasons to study chemistry. Chemistry helps you to understand the world around you. Why do <u>leaves change color</u> in the fall? Why are plants green? How is cheese made? What is in soap and how does it clean? These are all <u>questions that can be answered</u> chemistry. Basic knowledge of chemistry helps you to read and understand product labels.

My Personal Welcome

Welcome to the course! Welcome to General Chemistry I lab—I'm delighted that you have chosen this course. One of my passions is teaching students in a fun and effective way, I can hardly wait to pass that on. 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. 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.

Preferred Method of Contact

Office Hours

By appointment

Course Overview

Course Description

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.

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 HCCS Student Handbook.

Department Website

https://www.hccs.edu/programs/areas-of-study/science-technology-engineering--math/chemistry/

Core Curriculum Objectives (CCOs)

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

- Reading/ Writing: Students will engage in reading and writing activities through the laboratory exercises by reading labs prior to
 class, completing pre-lab activities, and writing results in lab reports, providing an understanding of chemical concepts observed
 in the lab.
- Speaking/Listening: Students will learn to communicate significant lab findings with their peers as well as the instructor by asking (speaking) and answering (listening) questions throughout the experiment.
- Critical Thinking: Students will demonstrate a deeper understanding of chemical concepts by completing labs, collecting data and analyzing results, and drawing conclusions. Connections to broader chemical topics may also be made.
- Computer/Information Literacy: Students will engage in utilization of computer and written references as resources as they
 prepare for and complete lab reports.

Student Learning Outcomes and Objectives

Program Student Learning Outcomes (PSLOs)

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

Course Student Learning Outcomes (CSLOs)

- 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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- 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.
- 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.

Departmental Practices and Procedures

A comprehensive lab exam is required at the of this course.

Department Specific Instructor and Student Responsibilities 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

Program-Specific Student Success Information

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.

Instructional Materials and Resources

Instructional Materials

The <u>HCC Online Bookstore (https://hccs.bncollege.com/shop/hccs-central/page/find-textbooks)</u> provides searchable information on textbooks for all courses.

1. Laboratory Experiments for Chemistry: The Central Science, Pearson ISBN-13: 978-0-136-68805-1

Temporary Free Access to E-Book

NA

Other Instructional Resources

NA

Course Requirements

Assignments, Exams, and Activities

| Туре | Weight | Topic | Notes |
|--------------------|--------|-------|--|
| Lab Assignments | 80% | | There will be a total of 13 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. |

| Туре | Weight | Topic | Notes |
|--------------|--------|-------|-------------------------------|
| Final Exam | 20% | | Describe the assignment here. |
| Extra Credit | | | NA |

Grading Formula

| Grade | Range | Notes |
|-------|---------------|-------|
| Α | 90-100% | |
| В | 80-89% | |
| С | 70-79% | |
| D | 60-69% | |
| F | 59% and below | |

Instructor's Practices and Procedures

Incomplete Policy

In order to receive a grade of Incomplete ("I"), a student must have completed at least 85% of the work in the course. In all cases, the instructor reserves the right to decline a student's request to receive a grade of Incomplete.

Missed Assignments/Make-Up Policy

Students are expected to attend all the lab sessions regularly. Students must watch safety video during the first lab of class. Students who missed the Videotape: Starting with Safety reserved in the library must take the written Safety exam to meet the requirement. Students should make arrangements with the instructor for make-up if a lab period is missed. For any unpredictable or uncontrollable absence due to illness or work, you must bring the third party's documentation like physician's note or letter from employer to avoid point deduction of your lab. Make-up lab will be given at the end of semester for only ONE missed lab. No grade will be released over the phone or by email or to your friend, classmates or spouse even if you are taking the same class.

Academic Integrity

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

https://www.hccs.edu/about-hcc/procedures/student-rights-policies--procedures/student-procedures/ (https://www.hccs.edu/about-hcc/procedures/student-rights-policies--procedures/student-procedures/)

Attendance Procedures

Students activity on Canvas is tracked as the attendance for that week.

Student Conduct

Students are responsible for conducting themselves with honor and integrity in fulfilling course requirements. Disciplinary proceedings may be initiated by the college system against a student accused of scholastic dishonesty. Penalties can include a grade of "0" or "F" on the particular assignment, failure in the course, academic probation, or even dismissal from the college. Scholastic dishonesty includes, but is not limited to, cheating on a test, plagiarism, and collusion." In this class, the penalty for willful cheating on exams is a grade of F in the course.

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. 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/

Instructor's Course-Specific Information

Your letter grade will be based on how well you have met the requirement and grading policy. There are 13 labs in total during the semester and each lab worth 100 points. Each experiment will be graded based on the following:

13 labs 80% (60% lab report + 10% prelab quiz + 10% post lab) + Final exam 20%

Devices

CELLULAR PHONES, INTERNET ACCESSABLE WATCHES, PROGRAMMABLE/INTERNET ACCESSABLE CALCULATORS, AND COMPUTERS ARE NOT ALLOWED for the final exam.

Faculty Statement about Student Success

As with any three-hour course, expect to spend *at least six hours per week* of studying the material. I will provide assignments to help you use those six hours per week wisely. Additional time will be required for written assignments. Successful completion of this course requires a combination of watching the videos, completing assignments on time. There is no short cut for success in this course; it requires reading, solving problems and studying the material using the course objectives as your guide.

Faculty-Specific Information Regarding Canvas

This course section will use Canvas (https://eagleonline.hccs.edu (https://eagleonline.hccs.edu) to supplement in-class assignments, exams, and activities.

HCCS Open Lab locations may be used to access the Internet and Canvas. For best performance, Canvas should be used on the current or first previous major release of Chrome, Firefox, Edge, or Safari. Because it's built using web standards, Canvas runs on Windows, Mac, Linux, iOS, Android, or any other device with a modern web browser.

Canvas only requires an operating system that can run the latest compatible web browsers. Your computer operating system should be kept up to date with the latest recommended security updates and upgrades.

Social Justice Statement

Houston Community College is committed to furthering the cause of social justice in our community and beyond. HCC does not discriminate on the basis of race, color, religion, sex, gender identity and expression, national origin, age, disability, sexual orientation, or veteran status. I fully support that commitment and, as such, will work to maintain a positive learning environment based upon open communication, mutual respect, and non-discrimination. In this course, we share in the creation and maintenance of a positive and safe learning environment. Part of this process includes acknowledging and embracing the differences among us in order to establish and reinforce that each one of us matters. I appreciate your suggestions about how to best maintain this environment of respect. If you experience any type of discrimination, please contact me and/or the Office of Institutional Equity at 713-718-8271.

ndering HCC Policies and Information

HCC Grading System

HCC uses the following standard grading system:

| Grade | Grade Interpretation | Grade Points |
|-------|---|--------------|
| А | Excellent (90-100) | 4 |
| В | Good (80-89) | 3 |
| С | Fair (70-79) | 2 |
| D | Passing (60-69), except in developmental courses. | 1 |
| F | Failing (59 and below) | 0 |
| FX | Failing due to non-attendance | 0 |
| W | Withdrawn | 0 |
| I | Incomplete | 0 |
| AUD | Audit | 0 |
| IP | In Progress. Given only in certain developmental courses. A student must re-enroll to receive credit. | 0 |
| СОМ | Completed. Given in non-credit and continuing education courses. | 0 |

Link to Policies in Student Handbook

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

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

Veteran Services

Link to HCC Academic Integrity Statement

https://www.hccs.edu/resources-for/faculty/student-conduct-resources-for-faculty/ (https://www.hccs.edu/resources-for/faculty/student-conduct-resources-for-faculty/)

Campus Carry Link

Here's the link to the HCC information about Campus Carry:

https://www.hccs.edu/departments/police/campus-carry/ (https://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 (https://www.hccs.edu/resources-for/current-students/student-e-maileagle-id/) and activate it now. You may also use Canvas Inbox to communicate.

Office of Institutional Equity

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

Ability Services

HCC strives to make all learning experiences as accessible as possible. If you anticipate or experience academic barriers based on your disability (including long and short term conditions, 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 https://www.hccs.edu/support-services/ability-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/ (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/ (https://www.hccs.edu/about-hcc/procedures/student-rights-policies--procedures/student-complaints/speak-with-the-dean-of-students/)

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 a guide.

Canvas Learning Management System

Canvas is HCC's Learning Management System (LMS), and can be accessed at the following URL:

https://eagleonline.hccs.edu (https://eagleonline.hccs.edu)

HCCS Open Lab locations may be used to access the Internet and Canvas. For best performance, Canvas should be used on the current or first previous major release of Chrome, Firefox, Edge, or Safari. Because it's built using web standards, Canvas runs on Windows, Mac, Linux, iOS, Android, or any other device with a modern web browser.

Canvas only requires an operating system that can run the latest compatible web browsers. Your computer operating system should be kept up to date with the latest recommended security updates and upgrades.

HCC Online Information and Policies

Here is the link to information about HCC Online classes, which includes access to the required Online Information Class Preview for all fully online classes: https://www.hccs.edu/online/ (https://www.hccs.edu/on

Scoring Rubrics, Sample Assignments, etc.

Look in 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)

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 learner-centered instructional techniques
- · Provide a description of any special projects or assignments
- . Inform students of policies such as attendance, withdrawal, tardiness, and making up assignments
- · Provide the course outline and class calendar that will include a description of any special projects or assignments
- · Arrange to meet with individual students during office hours, and before and after class as required

As a student, it is your responsibility to:

- · Attend class in person and/or online
- Participate actively by reviewing course material, interacting with classmates, and responding promptly in your communication with me
- · Read and comprehend the textbook
- · Complete the required assignments and exams
- · Ask for help when there is a question or problem
- . Keep copies of all paperwork, including this syllabus, handouts, and all assignments

Be aware of and comply with academic honesty policies in the <u>HCCS Student Handbook (https://www.hccs.edu/resources-for/current-students/student-handbook/)</u>

Sensitive or Mature Course Content

In this college-level course, we may occasionally discuss sensitive or mature content. All members of the classroom environment, from your instructor to your fellow students, are expected to handle potentially controversial subjects with respect and consideration for one another's varied experiences and values.

EGLS3

The EGLS³ (Evaluation for Greater Learning Student Survey System (https://www.hccs.edu/resources-for/current-students/egls3-evaluate-your-professors/)) 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.

https://www.hccs.edu/resources-for/current-students/egls3-evaluate-your-professors/ (https://www.hccs.edu/resources-for/current-students/egls3-evaluate-your-professors/)

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.

Student Resources

Tutoring

HCC provides free, confidential, and convenient academic support, including writing critiques, 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 (https://www.hccs.edu/resources-for/current-students/tutoring/">HCC Tutoring Services (https://www.hccs.edu/resources-for/current-students/tutoring/) website for services provided.

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 https://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 https://www.hccs.edu/resources-for/current-students/supplemental-instruction/ (https://www.hccs.edu/resources-for/current-students/supplemental-instruction/).

Resources for Students:

https://www.hccs.edu/resources-for/current-students/communicable-diseases/resources-for-students/ (https://www.hccs.edu/resources-for/current-students/communicable-diseases/resources-for-students/)

Basic Needs Resources:

 $\frac{https://www.hccs.edu/support-services/counseling/hcc-cares/basic-needs-resources/\ (https://www.hccs.edu/support-services/counseling/hcc-cares/basic-needs-resources/)}{(https://www.hccs.edu/support-services/counseling/hcc-cares/basic-needs-resources/)}{(https://www.hccs.edu/support-services/counseling/hcc-cares/basic-needs-resources/)}{(https://www.hccs.edu/support-services/counseling/hcc-cares/basic-needs-resources/)}{(https://www.hccs.edu/support-services/counseling/hcc-cares/basic-needs-resources/)}{(https://www.hccs.edu/support-services/counseling/hcc-cares/basic-needs-resources/)}{(https://www.hccs.edu/support-services/counseling/hcc-cares/basic-needs-resources/)}{(https://www.hccs.edu/support-services/counseling/hcc-cares/basic-needs-resources/)}{(https://www.hccs.edu/support-services/counseling/hcc-cares/basic-needs-resources/)}{(https://www.hccs.edu/support-services/counseling/hcc-cares/basic-needs-resources/)}{(https://www.hccs.edu/support-services/counseling/hcc-cares/basic-needs-resources/)}{(https://www.hccs.edu/support-services/counseling/hcc-cares/basic-needs-resources/)}{(https://www.hccs.edu/support-services/counseling/hcc-cares/basic-needs-resources/)}{(https://www.hccs.edu/support-services/counseling/hcc-cares/basic-needs-resources/counseling/hcc-cares/basic-needs-resources/counseling/hcc-cares/basic-needs-resources/counseling/hcc-cares/basic-needs-resources/counseling/hcc-cares/basic-needs-resources/counseling/hcc-cares/basic-needs-resources/counseling/hcc-cares/basic-needs-resources/counseling/hcc-cares/basic-needs-resources/counseling/hcc-cares/basic-needs-resources/counseling/hcc-cares/basic-needs-resources/counseling/hcc-cares/basic-needs-resources/counseling/hcc-cares/basic-needs-resources/counseling/hcc-cares/basic-needs-resources/counseling/hcc-cares/basic-needs-resources/counseling/hcc-cares/basic-needs-resources/counseling/hcc-cares/basic-needs-resources/counseling/hcc-cares/basic-needs-resources/counseling/hcc-cares/basic-needs-resources/counseling/hcc-cares/basic-needs-resource$

Student Basic Needs Application:

https://hccs.co1.qualtrics.com/jfe/form/SV_25WyNx7NwMRz1FH (https://hccs.co1.qualtrics.com/jfe/form/SV_25WyNx7NwMRz1FH)

COVID-19

Here's the link to the HCC information about COVID-19:

https://www.hccs.edu/resources-for/current-students/communicable-diseases/ (https://www.hccs.edu/resources-for/current-students/communicable-diseases/)

Instructional Modalities

In-Person (P)

Safe, face-to-face course with scheduled dates and times

Online on a Schedule (WS)

Fully online course with virtual meetings at scheduled dates and times

Online Anytime (WW)

Traditional online course without scheduled meetings

Hybrid (H)

Course that meets safely 50% face-to-face and 50% virtually

Hybrid Lab (HL)

Lab class that meets safely 50% face-to-face and 50% virtually

Example 2 Course Calendar

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.

| Week # | Lab |
|--------|--|
| Week 1 | Introduction and Lab Safety |
| Week 2 | Experiment 1 – Basic Laboratory Techniques |
| Week 3 | Experiment 2 – Separation of the Components of a Mixture |
| Week 4 | Experiment 3 – Identification of Substances by Physical Properties |

| Week 5 | Experiment 4 - Chemical Formulas |
|---------|--|
| Week 6 | Experiment 5 - Moles and Chemical Formulas |
| Week 7 | Experiment 6- Gravimetric Analysis of a Chloride Salt |
| Week 8 | Experiment 7 – Chemical reaction of copper and percent yield |
| Week 9 | Experiment 8 – Activities Series |
| Week 10 | Experiment 9 - Reactions in Aqueous Solution |
| Week 11 | Experiment 10 - Acid-Base Titration |
| Week 12 | Experiment 11 - Behavior of Gases |
| Week 13 | Experiment 12 – Heat of Neutralization |
| Week 14 | Experiment 13 – Molecular Geometries of Covalent Molecules |
| Week 15 | Final exam |

Additional Information

Departmental/Program Information

Please visit the chemistry program page for more about our degree offering, requirements, employment prospects and more.

https://www.hccs.edu/programs/areas-of-study/science-technology-engineering--math/chemistry/ (https://www.hccs.edu/programs/areas-of-study/science-technology-engineering--math/chemistry/)

Process for Expressing Concerns about the Course

If you have concerns about any aspect of this course, please reach out to your instructor for assistance first. If your instructor is not able to assist you, then you may wish to contact the Department Chair.

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