

Brazosport College

Syllabus for CHEM 1305 - Introductory Chemistry (Online)

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I. COURSE DESCRIPTION

CHEM 1305 - Introductory Chemistry. CIP 40005015103

A study of basic organic and inorganic chemistry with special emphasis placed on practical applications of chemistry. Designed for students with no previous background in chemistry.

Credit Hours: 3 (3 lecture, 0 lab)

Dr. Judy Chu

Dr. Kirby Lowery

Gary Hicks

Jeff Detrick

August 2021

- A. Required skill level:** College-level reading and writing. College-level with corequisite (placement code 3).

II. COURSE OBJECTIVES

This course is designed to help the student master the following:

A. Unit 1

- a. Learn the basic terms used to describe matter and energy.
- b. Understand the relationship of the masses of elements and compounds to the unit of measure, the mole.
- c. Understand the relationship of atomic structure to chemical properties.
- d. Predict the properties of element based on its position in the periodic table.

B. Unit 2

- a. Determine the names and formula of chemical compounds.
- b. Develop a good understanding for the relationship between percent by mass and the mole. Be able to convert from moles to grams and grams to moles.

C. Unit 3

- a. Write and balance chemical equations.
- b. Use the concept of stoichiometry to determine quantities of reactants needed and products formed in a chemical reaction.
- c. Identify the element oxidized, the element reduced and the oxidizing and reducing agents in a redox reaction.

D. Unit 4

- a. Obtain a basic understanding of the ideal gas law, i.e. the effect of pressure and temperature on volume.
- b. Understand the relationship between mass percent and molarity and how to convert from one to another. Also understand the dilution formula and how to use it.

E. Unit 5

- a. Distinguish between organic and inorganic compounds. Draw structural formulas and name the alkanes, alkenes and alkynes. Distinguish between saturated, unsaturated, and cyclic hydrocarbons.
- b. Discuss the general formula, names, structure and uses of alcohols, ethers, aldehydes, ketones, carboxylic acids and esters.
- c. Become familiar with monomers and polymers. Be exposed to polymer manufacturing and polymer evaluation technology.

III. STUDENT LEARNING OUTCOMES

At the completion of CHEM 1305 the student will be able to:

1. Use the periodic table to determine the chemical symbols of the elements, their electronic configurations, and to predict chemical formula.
2. Balance chemical equations.
3. Perform molar and mass quantity calculations given balanced chemical equations.

IV. TEXTBOOK OR COURSE MATERIAL INFORMATION

A. Textbook

1. Introductory Chemistry, Tro. Printed Standalone Access Card w/Modified Mastering Chemistry, 6th edition, ISBN 9780134565620. (required)
2. Scientific Calculator: T130XA. (required)

Required course materials are available at the Brazosport College bookstore, on campus or online at <http://brazosport.edu/bookstore/home.html>. Students are not under any obligation to purchase a textbook from the college bookstore. The same textbook is/may also be available from an independent retailer, including an online retailer.

For Distance Education Courses include the following: Contact the Brazosport College Bookstore with a credit card for course materials. Phone: 979-230-3651. Fax: 979-230-3653. Email: bookstore@brazosport.edu. Website: <http://brazosport.edu/bookstore/home.html>

Office Hours: Online by appointment only

Orientation Meeting: The orientation for Chemistry 1305.40 will be online at <https://online.brazosport.edu>. All students are required to become familiar with the material in this web page.

Introduction:

CHEM 1305 - Introductory Chemistry, Internet Section, is offered as an online learning class using a combination of the internet and a textbook. Brazosport College is pleased to welcome to this course students from the Virtual College of Texas, as well as students from the Brazosport area. The online section of CHEM 1305 is designed to replace the traditional lecture section of CHEM 1305. To complete the course, you must also be enrolled in the lab section of the course, either CHEM 1105L.40, the internet lab section, which is a home-based lab, or the traditional CHEM 1105L, which is held on campus. If you are a Brazosport College student, you have the option of choosing either the traditional lab section which meets on campus once a week, or the take-home lab section. For Virtual College students, you are automatically registered for the home-based lab. The home-based lab consists of a series of experiments to be performed each week using materials commonly found in your kitchen, bathroom, and other places around your home. You will perform an experiment, record observations, and then answer questions and draw conclusions based on your data.

VCT students – To pass the course, you must successfully complete the laboratory portion with a grade of D or better to receive 3 credit hours for CHEM 1305.

Connecting to the Internet Class:

Access the course by going to: <https://online.brazosport.edu/d2l/login>
Follow the instructions in [Logging on to D2L-1305-1105-internet](#) to login to the course in Desire2Learn. For help with login to Desire2Learn, email your problems to helpdesk@brazosport.edu.

B. Course Outline

CHEM 1305 – Fall 2021 Schedule*
Dr. J. Chu – Office: Online, e-mail: judy.chu@brazosport.edu

| WEEK | Date | LECTURE TT 9:30AM-10:45AM | LAB (T 1:10-3 PM) |
|-------------|-------------|--|-----------------------------------|
| 1 | 8/30 | Chapter 1 – The Chemical World Chapter 2 – Measurement and Problem Solving | No Lab |
| 2 | 9/6 | Chapter 2 – Measurement and Problem Solving | Exp 486 – Dimensional Analysis |
| 3 | 9/13 | Chapter 3 – Matter and Energy Review for Exam 1 | Tech 380 – Safety Practices |
| | 9/17-9/20 | Exam 1 online (Chapters 1-3) | |
| 4 | 9/20 | Chapter 4 – Atoms and Elements Chapter 9 – Electrons in Atoms and the Periodic Table | Exp. 382 - Transfer |
| 5 | 9/27 | Chapter 9 – Electrons in Atoms and the Periodic Table Chapter 10 – Chemical Bonding | Exp. 375 - Separation |
| 6 | 10/4 | Chapter 10 – Chemical Bonding Review for Exam 2 Chapters 5 – Molecules and Compounds | Exp. 375 - Separation (continued) |
| | 10/8-10/11 | Exam 2 online (Chapters 4, 9 and 10) | |
| 7 | 10/11 | Chapters 5 – Molecules and Compounds Chapter 7 – Chemical Reactions | Exp. 399 - Chemical Change |
| 8 | 10/18 | Chapter 7 – Chemical Reactions Review for Exam 3 | Exp. 405 - Identify |
| | 10/22-25 | Exam 3 online (Chapters 5 and 7) | |
| 9 | 10/25 | Chapter 6 – Chemical Composition | Exp. 387 - % Water |
| 10 | 11/1 | Chapter 8 – Quantities in Chemical Reaction Review for Exam 4 | Exp. 388 - Empirical Formula |
| | 11/5-11/8 | Exam 4 online (Chapters 6 and 8) | |
| | 11/8 | Last day to withdraw | Last Day to withdraw |
| 11 | 11/8 | Chapters 13 – Solutions | Make-up Lab |
| 12 | 11/15 | Chapter 14 – Acids and Bases | Exp. 394 - Molar Concentration |
| 13 | 11/22 | Chapter 11 – Gases (Tuesday) | No Lab (Thanksgiving) |
| 13 | 11/23 | Thanksgiving Holiday (Thursday) | No Lab (Thanksgiving) |
| 14 | 11/29 | Chapter 11 - Gases | Exp. 304 – Vinegar |
| | 11/26-29 | Exam 5 online - (Chapters 13, 14, and 11) | |
| 15 | 12/6 | Chapter 18 – Organic Chemistry (Tuesday) Final Exam Review (Thursday) | Clean up |
| 16 | 12/14 | Final Exam – Tuesday, Dec. 14, 10:30AM - 12:30 PM | |

*This schedule is subject to change.

Important Semester Dates:

Last Day to Withdraw from Classes– Check BC Academic Calendar at <http://catalog.brazosport.edu/index.php>

Office Hours: See Faculty Schedule (last page)

V. STUDENTS WITH DISABILITIES

Brazosport College is committed to providing equal education opportunities to every student. BC offers services for individuals with special needs and capabilities including counseling, tutoring, equipment, and software to assist students with special needs. For student to receive any accommodation, documentation must be completed in the Office of Disability Services. Please contact Phil Robertson, Special Populations Counselor at 979-230-3236 for further information.

VI. TITLE IX STATEMENT

Brazosport College faculty and staff are committed to supporting students and upholding the College District's non-discrimination policy. Under Title IX and Brazosport College's policy FFDA (Local), discrimination based on sex, gender, sexual orientation, gender identity, and gender expression is prohibited. If you experience an incident of discrimination, we encourage you to report it. While you may talk to a faculty or staff member at BC, please understand that they are "Responsible Employees" and must report what you tell them to college officials. You can also contact the Title IX Coordinators directly by using the contact information below. Additional information is found on the Sexual Misconduct webpage at www.brazosport.edu/sexualmisconduct

VII. ACADEMIC HONESTY

Brazosport College assumes that students eligible to perform on the college level are familiar with the ordinary rules governing proper conduct including academic honesty. The principle of academic honesty is that all work presented by you is yours alone. Academic dishonesty including, but not limited to, cheating, plagiarism, and collusion shall be treated appropriately.

Academic dishonesty violates both the policies of this course and the Student Code of Conduct. In this class, any occurrence of academic dishonesty will be referred to the Dean of Student Services for prompt adjudication, and may, at a minimum, result in F, in this course. Sanctions may be imposed beyond your grade in this course by the Dean of Student Services. It is your responsibility to know and understand the student code of conduct with regard to scholastic honesty, as well as the consequences for a breach of conduct. If you cheat on an exam, you will receive an "F" for the class. Please refer to the Brazosport College Student Guide for more information. This is available online at <http://brazosport.edu/students/for-students/student-services/>.

VIII. ATTENDANCE AND WITHDRAWAL POLICIES

Class attendance is not graded, but you must attend class to successfully complete the course. If you are unable to complete this course, you must complete and submit a withdrawal form with the registrar by Nov. 8, 2021. If this is not done, the student will receive a grade based on the test grades and class grades earned before he/she stopped coming to class.

IX. COURSE REQUIREMENTS AND GRADING POLICY

For this class you must complete the following:

- **Exams:** There will be a total of five exams. Each exam will last approximately one hour during class. The exact date of each Exam will be announced in class prior to the actual date of the exam.

- **Homework:** You will be using [MasteringChemistry](#), an online tutorial and homework program that accompanies your textbook. Due date for homework is the day of the exam. For example, Exam 1 covers chapters 1-3; therefore, the due date for chapters 1, 2, and 3 is the day of Exam 1.
- **Participation:** Attendance, working problems in class, and **no cell phone use in class**.
- **Final Exam:** The final will be given at the end of the course. The final exam is comprehensive.
- **SI Session:** Participation in Supplemental Instruction session to be held by the SI leader.

Each of the above requirements counts toward your final grade as follows:

| | |
|-----------------------|--|
| Hourly Exams | 60% |
| Homework | 15% |
| Participation | 5% |
| Final Exam | 20% |
| SI Session Attendance | Up to 10 extra points toward final grade |

Final grade will be determined by the following system:

| Grade | Final Average |
|-------|---------------|
| A | 90-100 |
| B | 80-89 |
| C | 70-79 |
| D | 60-69 |
| F | Below 60 |

- **Testing:** See the class calendar for the chapters and dates of the tests. The following items are allowed during the exam: one page of handwritten notes, containing equations, etc., and a calculator (scientific or graphing). **Smart phones are not permitted during exams!!**

The material to be covered on each exam is as follows:

| <u>Exam</u> | <u>Chapters</u> |
|-------------|---|
| 1 | 1 - 3 |
| 2 | 4, 9, 10 & 12 |
| 3 | 5 & 7 |
| 4 | 6 & 8 |
| 5 | 13, 14, & 11 |
| Final | Comprehensive Exam (all chapters from Exams 1-5 and chapter 18) |

- **Make-up Policy:** There will be no make-up exams. The lowest exam grade will be dropped. The final exam grade will replace **one** missed exam grade.

X. STUDENT CONDUCT STATEMENT

Students are expected to be aware of and follow the Brazosport College Student Code of Conduct. Students have violated the Code if they “fail to comply with any lawful directions, verbal or written, of any official at BC.” Lawful directions include precautions and requirements taken to prevent the spread of COVID-19 at Brazosport College. Students who do not follow safety requirements, including the wearing of a mask, may be removed from class by their instructor and referred to the Dean of Student Services.

XI. COVID-19 STATEMENT

At Brazosport College, all of us, including faculty, staff and students, share a common goal this fall semester, to keep our classes running in the safest manner possible and avoid any disruption to your progress in achieving your educational and career goals. To that end, we ask and encourage you to conduct yourself in the following manner while on campus this semester:

- Every day, perform a self-health check prior to coming to campus and stay home if sick.
- To the greatest extent possible, maintain your distance between you and other students, faculty, and staff while on campus.
- Wear a properly fitted face covering over your mouth and nose while indoors on campus. If you do not have a mask, they will be available to you in all classrooms this fall.
- Practice good hygiene, washing your hands regularly and/or using hand sanitizer.
- The most effective way to protect yourself from Covid-19 is through vaccination. The vaccine is readily available and at no cost to you. Vaccine information and availability can be found at <https://brazosport.edu/coronavirus/vaccine/>.

If at any time this semester you begin to experience Covid symptoms, or if you are exposed to someone who has tested positive for Covid-19, please take the following steps:

- Stay home if you're feeling sick and minimize your contact with others.
- Alert the College by completing the Covid-19 Exposure Report Form online at <https://brazosport.edu/coronavirus/report/>. Be sure to provide accurate contact information, including a working phone number that you will answer.
- After submitting the report, you will be promptly contacted by a member of our Rapid Response Team, who will ask you some specific questions about your situation and provide you with guidance moving forward.
- If it is determined that you should not come to class, your instructor will be notified. **Please know that your instructor will consider course adjustments and potential make-up work only if your case has been reported to Brazosport College, and they've been notified by our response team.** Your instructor will work with you to determine how to manage any make-up work.

The Community Health Network (CHN) Clinic at Brazosport College (located in BC Central B-Wing) is scheduled to be open from 8 AM to 6 PM Tuesday through Thursday during the Fall 2021 semester. While walk-ins are available, your visit will be easier if you pre-register by creating an account at www.mychn.org. In addition to providing health and behavioral services, CHN also provides COVID vaccinations and testing. All insurance is accepted, and healthcare is provided on a sliding scale including no cost for those who need it.

Throughout the semester, please regularly check the College's Covid-19 information page at <https://brazosport.edu/coronavirus/>, where the latest updates and guidelines will be posted. As members of the BC community, all of us share a responsibility to each other to be as safe as possible.

XII. CAMPUS CLOSURE STATEMENT

Brazosport College is committed to the health and safety of all students, staff, and faculty and adheres to all federal and state guidelines. The College intends to stay open for the duration of the semester and provide access to classes and support services on campus in the safest way possible.

The College will also comply with lawful orders given by applicable authorities, including the Governor of Texas, up to and including campus closure. It is possible that on campus activities may be moved online and/or postpone if such orders are given.

XIII. STUDENT RESPONSIBILITIES

Students are expected to fully participate in this course. The following criteria are intended to assist you in being successful in this course:

1. Understand the syllabus requirements
2. Use appropriate time management skills
3. Communicate with the instructor
4. Complete course work on time, and
5. Utilize online components (such as Desire2Learn) as required.

XIV. OTHER STUDENT SERVICES INFORMATION

Information about the Library is available at <http://brazosport.edu/students/for-students/places-services/library/about-the-library/> or by calling 979.230.3310.

For assistance with online courses, an open computer lab, online and make-up testing, audio/visual services, and study skills, visit Learning Services next to the Library, call 979-230-3253, or visit <http://brazosport.edu/students/for-students/places-services/learning-services/>

For drop-in math tutoring, the writing center, supplemental instruction, and other tutoring including e-tutoring, visit the Student Success Center, call 979-230-3527, or visit <http://brazosport.edu/students/for-students/student-success-center/math-center/>

To contact the Physical Sciences and Process Technologies Department call 979-230-3618.

The Student Services provides assistance in the following:

| | |
|-------------------------|---------------|
| Counseling and Advising | 979-230-3040 |
| Financial Aid | 979--230-3294 |
| Student Life | 979-230-3355 |

To reach the Information Technology Department for computer, email, or other technical assistance call the Helpdesk at 979.230.3266.



Get the information you need – when you need it. Click <http://geni.us/BRAZO> to install **BC Connect** on your mobile device to receive reminders, explore careers, map your educational plan, be in the know about events, find out about scholarships, achieve your goals and much more.



Dear Student:

In this course you will be using MasteringChemistry®, an online tutorial and homework program that accompanies your textbook.

What You Need:

- ✓ **A valid email address**
- ✓ **A student access code** (included in your textbook if you bought it from the BC Bookstore)
- ✓ **The ZIP code for your school:** 77566

A Course ID: _____ (Provided by your instructor)

Register

- Go to www.masteringchemistry.com and click **New Students** under **Register**.
- To register using the Student Access Code above select **Yes, I have an access code**. Click **Continue**.
- **License Agreement and Privacy Policy:** Click **I Accept** to indicate that you have read and agree to the license agreement and privacy policy.
- Select the appropriate option under “Do you have a Pearson Education account?” and supply the requested information. Upon completion, the **Confirmation & Summary** page confirms your registration. This information will also be emailed to you for your records. You can either click **Log In Now** or return to www.masteringchemistry.com later.

Log In

- Go to www.masteringchemistry.com.
- Enter your Login Name and Password and click **Log In**.

Enroll in Your Instructor's Course and/or Access the Self-Study Area

Upon first login, you'll be prompted to do one or more of the following:

- **Join your MasteringChemistry course** by entering the **MasteringChemistry Course ID** provided by your instructor.

Click **Save** and **OK**.

Congratulations! You have completed registration and have enrolled in your instructor's MasteringChemistry course. To access your course from now on, simply go to www.masteringchemistry.com, enter your Login Name and Password, and click **Log In**. If your instructor has created assignments, you can access them in the **Assignments Due Soon** area or by clicking **View All** in this area. Otherwise, click on **Study Area** to access self-study material.

Support

Access Customer Support at www.masteringchemistry.com/support, where you will find:

- System Requirements
- Answers to Frequently Asked Questions
- Additional contact information for Customer Support, including Live Chat



SEMESTER: FALL 2021

INSTRUCTOR: Judy Chu

OFFICE: VIRTUAL

EMAIL: judy.chu@brazosport.edu

PHONE: 979-230-3435

| WEDNESDAY | | | |
|-----------|----------|----------------|--------|
| Start | End | Class/Location | Room |
| 9:00 AM | 9:30 AM | OFFICE | ONLINE |
| 9:30 AM | 10:45 AM | CHEM 1311.41 | ONLINE |
| 10:45 AM | 12:45 PM | CHEM 1305.40 | ONLINE |
| 12:45 PM | 1:00 PM | LUNCH | |
| 1:00 PM | 3:00 PM | CHEM 1105.42 | ONLINE |
| 3:00 PM | 5:45 PM | CHEM 1105.40 | ONLINE |
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| FRIDAY | | | | Hrs |
|--------|-----|----------------|------|------|
| Start | End | Class/Location | Room | |
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| THURSDAY | | | | Hrs |
|----------|----------|----------------|--------|------|
| Start | End | Class/Location | Room | |
| 9:00 AM | 9:30 AM | OFFICE | ONLINE | 0.50 |
| 9:30 AM | 10:45 AM | CHEM 1305.41 | ONLINE | 1.25 |
| 10:45 AM | 12:00 PM | OFFICE | ONLINE | 1.25 |
| 12:00 PM | 12:30 PM | LUNCH | | |
| 12:30 PM | 4:00 PM | CHEM 1305.41 | ONLINE | 3.50 |
| 4:00 PM | 5:00 PM | CHEM 1105.40 | ONLINE | 1.00 |
| 5:00 PM | 6:00 PM | OFFICE | ONLINE | 1.00 |
| | | | | |
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TOTAL HOURS 35.00

**OTHER OFFICE HOURS AVAILABLE
BY APPOINTMENT**