BROOKHAVEN COLLEGE - Mathematics and Science Division
INTRODUCTORY CHEMISTRY I CHEM 1405 – 25501 SUMMER 1 2018

Instructor:	Rachana Singh	**Office:**	X3039
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Office hours:	T: 4:40 –5:40 pm **(By appointment only)**		
Lecture Time:	MW: 5:40 – 9:50 pm	**Room:**	X3005
Lab Time:	T R : 5:40 – 9:50 pm	**Room:**	X3032
Last day to drop with a "W": Wednesday, June 27		**Final Exam : Friday, July 6**	

Course Information:

CHEM 1405, Introductory Chemistry I (4 credit hours)
This is a Core Curriculum course selected by the colleges of DCCCD. It satisfies 4 credit hours of Foundational Component Area 030: *Life and Physical Science*. CHEM 1405 is a Texas Common Course Number.

Prerequisites:
DMAT 0305. College level ready in Reading.

Catalog Description:
This course is for non-science majors. Fundamental concepts are presented in lecture and laboratory including the periodic table, atomic structure, chemical bonding, reactions, stoichiometry, states of matter, properties of metals, nonmetals and compounds, chemical nomenclature, acid-base theory, oxidation-reduction and solutions. Descriptive chemistry is emphasized. (3 Lecture, 3 Lab)

Coordinating Board Academic Approval Number 4005015103 Note:
students MAY NOT transfer *both* CHEM 1405 and CHEM 1411.

Required Texts:

1. **Introductory Chemistry Essentials**

Edition: 6th, **Author:** Tro, **ISBN:** 9780134291802, **Copyright Year:** 2018, **Publisher:** Pearson
This book may be ***RENTED*** from the campus bookstore or you may purchase an electronic version. You may purchase earlier editions. Do **NOT** purchase the Mastering Chemistry code.

2. **Sapling Single Course HW Intro Chem (access Code)**

Edition: N/A, **ISBN:** 9781319080235, **Sapling Learning Login:**https://www.saplinglearning.com/ibiscms/login/
Required Supplies: Safety Goggles (fully-enclosed), Apperson test answer forms, 30 cm ruler (for graphing), 3-ring binder (for labs) Scientific Calculator: Non-programmable, Non-graphing (TI 30X IIS recommended) *Programmable*

calculators containing alpha keys & graphing calculators will not be allowed on tests. Cell phone calculators will not be allowed on tests.

Optional Additional Texts (not required):

1. Study Guide, *ISBN:* 9780321949059
2. Student Solutions Manual, *ISBN:* 9780321949073

Class Information

This syllabus and the class schedule will give you a detailed description of the course.

The **"Course Information"** button contains helpful information such as the syllabus, schedule information and required textbooks etc.

Course material can be found under the **"Course Content"** button. The course is broken down into chapters which correspond to the chapters in the Tro "Introductory Chemistry" textbook. We will be covering approximately ONE chapter per week. For each chapter (except chapter 1) you should complete the following:

- Read the chapter in the textbook
- Participate in class by taking notes and completing **all** of the examples and skill-builders.
- Ask questions!
- Refer to handouts for the salient points in the chapter (useful when reviewing for the test!)
- Watch the videos
- Complete the end of chapter questions (answers to the odd questions are at the back of the book)
- Complete and submit the Sapling Learning online homework (this is where you earn points!)

Evaluation of final grade

Lecture: 80 % of final grade **Lab: 20 % of final grade**

The lecture portion of the course is comprised of online homework, surveys, tests and a ***comprehensive final exam***.

Online Homework:	130 pts.
Labs:	170 pts.
4 tests at 100 pts each:	400 pts.
Final Exam:	100 pts.
Total Points:	**800** pts.

A = 89.5+ %

B = 79.5 – 89.4 %

C = 69.5 – 79.4 %

D = 59.5 – 69.4 %

F = < 59.5 %

Testing Information Test dates and the chapters covered on the tests will be announced on eCampus and are also given in the eCampus Course Calendar. Tests may include written responses, for example "show your work" problems, as well as multiple choice questions. Tests are "write-on" and will be given in the Testing Center S Building) from Friday - Monday. The Final Exam will be given in class. Programmable/graphing calculators, cell-phone calculators, dictionaries, translators etc. are not allowed to be used during tests. There will be no make-up tests, no late tests, no retakes and no drop the lowest grade option.

Attendance Policy
All registered students must attend a mandatory safety lab and orientation during their first scheduled lab period. Successful completion of the mandatory safety lab is required to continue in the course. You must attend your scheduled lab period each week. You cannot attend an alternative lab session. There are no make-up labs. If you miss two labs, you must withdraw from the class or your course grade will be an "F".

Institutional Policies Brookhaven College Institutional Policies can be found at the following link:
https://www.Brookhavencollege.edu/syllabusaddendum.
You may request a hard copy of these policies from your instructor.

Student Learning Outcomes (SLOs)

Upon successful completion of this Introductory Chemistry course, students will:

1. Convert units of measurement and demonstrate dimensional analysis skills.
2. Classify matter according to its state and composition.
3. Determine the role of energy in physical and chemical changes.
4. Write chemical formulas and use the rules of nomenclature to name chemical compounds.
5. Write and balance chemical equations. Define the types and characteristics of different chemical reactions.
6. Solve stoichiometric problems.
7. Determine the basic nuclear and electronic structure of atoms.
8. Identify trends in chemical and physical properties of the elements using the Periodic Table.
9. Describe the bonding in, and the shape of, simple molecules and ions.
10. Use the Gas Laws and basics of the Kinetic Molecular Theory to solve gas problems.
11. Determine the concentration of aqueous solutions.
12. Identify the characteristics of acids and bases, and solve problems based on their quantitative relationships.

Expectations of students:

- Read each assigned chapter in the book.
- Work **ALL** of the problems in the chapter AND the end of chapter problems.
- Complete all of the online activities, including reading the power points and handouts, watching the videos and completing the worksheets and online homework.
- Ask questions!
- Attend all of your labs.
- If you are having trouble, visit your instructor during office hours or via email.
- If you need more help, meet with the chemistry department's tutors in room X3023 (no appointment necessary, schedule available on e Campus).
- If an extended illness or an unusual situation develops let your instructor know.
- Do not engage in academic dishonesty

Academic Dishonesty

Academic honesty is expected, and integrity is valued in the Dallas County Community Colleges. Scholastic dishonesty is a violation of the Code of Student Conduct and includes, but is not limited to, cheating on a test, plagiarism, and collusion. If you are caught cheating or aiding cheating, you may be suspended according to DCCCD policy, receive "zero" for the assignment in question, or receive an "F" grade for the overall course, at the instructor's discretion.

Brookhaven Chemistry Laboratory Policies and Information

Lab experiments will be accessed through an e Campus Community called **BHC-CHEM-1405-LAB**. You can access the lab community by clicking on the Community tab located at the top left-hand-side of the e Campus screen.

Pre-lab Activity

Brookhaven chemistry experiments require a pre-lab activity. The purpose of the pre-lab is to ensure that you understand the experiment and all related safety procedures**.** The required pre-lab activities for most CHEM 1405 labs are:

1. Open the folder for the experiment in the **e Campus CHEM 1405 Lab Community**
2. View any required lab videos
3. Download and print the experiment
4. Read the experiment and outline the general steps of the procedure in your own handwriting. This procedure summary should be no more than one page in length.
5. Examine the provided data tables. Think about how you are going to acquire the information necessary to fill them out.
6. Answer all pre-lab questions

Be sure you know how to do all the calculations required in the experiment prior to coming to lab. If you can't do the calculations, then seek help before lab.

If you have not completed the pre-lab correctly, and in full, you will not be permitted to attend lab.

The Experiment

There will be a short safety and technique discussion and demonstration at the beginning of each lab period. If you come to lab late, you will not be admitted to the lab class. Observations, data collection, results, and calculations will be completed in lab. **You are expected to wear appropriate clothing and protective eyewear (fully-enclosed goggles) at all times. No flip-flops or open-toed shoes are permitted in the chemistry laboratory.**

Post Lab

At the end of lab you will write your lab report. You may discuss your results with other students but your report is an individual effort. Be careful not to plagiarize. Lab reports are due at the end of the lab period on the completion of the experiment. Late reports will not be accepted. The quality of calculations and reasoning will have as much impact on your grade as your experimental results.

Lab Attendance Policy

- All registered students must attend a mandatory safety lab during the first scheduled lab period.
- Successful completion of the mandatory safety lab is required to continue in the course.
- If you arrive late for any chemistry lab, you will not be permitted to stay, and you will receive "0" for that lab.
- If you have not completed the pre-lab correctly, and in full, you will not be permitted to attend lab.
- There are no make-up chemistry labs.
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<u>If you miss TWO chemistry labs, you must withdraw from the class or your final grade will be an "F".</u>

SU18 CHEM 1405 25501 Tentative Schedule

Week of	MW Lecture	Sapling Homework	Tuesday Lab	Thursday Lab	Take home labs	Test
06/04	Ch. 2 & 3	Due Tuesday 06/12 at 11:59pm	Safety & Slime Bring copies of both experiments	Precision Lab	Significant Figure Assignment Due 06/12	# 1 Ch. 2 & 3 Saturday 06/9 – Tuesday 06/12
06/11	Ch. 4, 5 & 6	Due Sunday 06/17 at 11:59 pm	Density Pre-lab and summary due	Obs. Phys/Chem Phenomena Pre-lab and summary due	Names and Formulas Due Monday 6/18	# 2 Ch 4, 5 & 6 Friday 06/15 – Monday 06/18
06/18	Ch. 7-9	Due Sunday 06/24 at 11:59 pm	Simplest Formula Pre-lab and summary due	Qualitative Analysis Pre-lab and summary due	Chemical Equations Due Monday 6/25	Ch. 7 – 9 Friday 06/22 – Monday 06/25
06/25	Ch. 10-12	Due Sunday 07/ 01 at 11:59 pm	Copper Cycle Pre-lab and summary due	Aspirin Pre-lab and summary due	Molecular Models Due Monday 7/2	Ch. 10 – 12 Friday 06/29 – Monday 07/02
07/02	Ch 13 & 14	Due Sunday 07/ 8 at 11:59 pm	Charles' Law Pre-lab and summary due	Titration Pre-lab and summary due		Final Exam 07/06

The instructor reserves the right to amend this syllabus and the lecture, lab and testing schedules as required.