Introductory Chemistry I Syllabus
Dallas College Brookhaven Campus

Contacting Your Instructor
Instructors typically respond to emails from students within 24 hours. However, over the weekend and holiday periods responses may be delayed. Find out more about contacting your instructor.

Instructor Information
Name: Rachana Singh
Email: rsingh@dcccd.edu
Office Location: X3039
Virtual Office Hours: Wed 12:30 – 1:30 pm
Division Office Phone: K224, 972 860 4750

Course Information
Course Title: Introductory Chemistry I
Course Number: CHEM 1405
Section Number: 21002
Semester/Year: Fall 2020
Credit Hours: 4
Class Meeting Time/Location: Online
Certification Date: 9/5/20
Last Day to Withdraw: 11/12/20

Course Prerequisites
None
Course Description
This is a Texas Common Course Number. This is a Dallas College Core Curriculum course. 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 Lec., 3 Lab.)

Coordinating Board Academic Approval Number 4005015103

Student Learning Outcomes
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.
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.

Texas Core Objectives
The College defines essential knowledge and skills that students need to develop during their college experience. These general education competencies parallel the Texas Core Objectives for Student Learning. In this course, the activities you engage in will give you the opportunity to practice two or more of the following core competencies:

1. Critical Thinking Skills - to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information
2. **Communication Skills** - to include effective development, interpretation, and expression of ideas through written, oral, and visual communication

3. **Empirical and Quantitative Skills** - to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions

4. **Teamwork** - to include the ability to consider different points of view and to work effectively with others to support a shared purpose or goal

5. **Personal Responsibility** - to include the ability to connect choices, actions, and consequences to ethical decision-making

6. **Social Responsibility** - to include intercultural competence, knowledge of civic responsibility, and the ability to engage effectively in regional, national, and global communities

### Required Course Materials

If your Dallas College course requires learning materials they will be provided as part of the [IncludED program](dcccd.edu/included) or as free materials you can access in your online course shell.

If you opt out of the IncludED program, you are responsible for obtaining all your required learning materials by the first day of the class. For more details, see [Institutional Policies](#).

#### Required Materials (provided as part of IncludED program):

1. Introductory Chemistry Essentials  

#### Additional Required Materials (not part of IncludED):

The following supplies are also required, but are not part of the IncludED program:

1. 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.
2. Elmer’s school glue, 4 oz. (for Slime lab)
3. Borax laundry detergent booster (for Slime lab)
Optional Additional Texts (not required):


Graded Work

The tables below provide a summary of the graded work in this course and an explanation of how your final course grade will be calculated.

Lecture is 80% of final grade. Lab is 20% of final grade.
The lecture portion of the course is comprised of online homework, survey, fore tests and a comprehensive final exam.

Summary of Graded Work

<table>
<thead>
<tr>
<th>Assignments</th>
<th>Points</th>
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</thead>
<tbody>
<tr>
<td>Online homework</td>
<td>13 @ 10 points each = 130</td>
</tr>
<tr>
<td>Surveys</td>
<td>2 @ 5 point = 10</td>
</tr>
<tr>
<td>Tests</td>
<td>4 @ 100 points each = 400</td>
</tr>
<tr>
<td>Comprehensive Final Exam</td>
<td>1 @ 100 points = 100</td>
</tr>
<tr>
<td>Labs</td>
<td>2 @ 20 points and 12 @ 10 points each = 160</td>
</tr>
<tr>
<td><strong>Total Points</strong></td>
<td><strong>800</strong></td>
</tr>
</tbody>
</table>

Final Grade

<table>
<thead>
<tr>
<th>Percentages</th>
<th>Letter Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;89.5</td>
<td>A</td>
</tr>
<tr>
<td>79.5 – 89.4</td>
<td>B</td>
</tr>
<tr>
<td>69.5 – 79.4</td>
<td>C</td>
</tr>
<tr>
<td>59.5 – 69.4</td>
<td>D</td>
</tr>
<tr>
<td>&lt;59.5</td>
<td>F</td>
</tr>
</tbody>
</table>

Description of Graded Work
Online Homework: Homework assignments are electronic and are taken via Sapling Learning. Every chapter has an online homework assignment.

• The assignment for Chapter 1 is a practice assignment and is worth 5 points of extra credit.
• A link to Sapling Learning is given in the left-hand menu of the eCampus lecture course and a link to each homework assignment is given in each chapter folder under the Course Content button.
• Access to Sapling is included in your tuition unless you opted out of the IncludED program. You must register for your Sapling account through eCampus. The link to register is located under the Sapling Learning eCampus menu button and in the eCampus Chapter 1 folder, under Course Content.
• Each homework assignment is worth 10 points.
• There are thirteen homework assignments which equates to 130 points. Failure to complete the homework will have a significant negative impact on your overall course grade, lowering it by as much as two letter grades.
• Homework is “open book” but please work alone.
• Homework due dates are given in the eCampus Course Calendar.

Surveys: Two surveys, worth five points each, are given during the first and last week of the semester. The surveys ask for honest feedback, and are anonymous. The surveys are located on eCampus. Survey due dates are given in the eCampus Course Calendar.

Online Tests and Final Exam: Tests will be given via eCampus, and will be located in the Test folders, in the Course Content area. Tests will be true/false and multiple choice. You may use scratch paper to work out calculations etc, and refer to your notes, but you may not refer to the internet during the test.

Extra Credit: There are opportunities for extra credit for this course.

• You may participate in the Periodic Table Art Project. Details of the project are available on eCampus. The project may be submitted in the Final Exam folder of eCampus and is due in finals week. Submission of a piece of art that meet the criteria will earn 10 points.
• Each online chapter folder (except Chapters 1 & chapter @ ) contains a short “mini quiz” on material we have covered in the previous chapter. Each mini quiz is worth two points of extra credit.

Labs: Labs are an important part of the chemistry experience; they help you connect theory discussed in lecture with real-world observations. Participation in the lab portion of the course is mandatory. The lab portion of the course is accessed through an eCampus Community called BHC-CHEM-1405-LAB. You can access the lab community by clicking on the Community
tab located at the top of the eCampus screen. Once in the Lab Community, click on the FA2020 Labs menu button. This semester you will not actually be performing "wet labs". Instead, you will complete “dry labs”, digital simulations or study assignments.

To submit your lab reports you must type your answers directly into a Word document, save it with a given file name, and then upload it to eCampus via the provided link. Detailed instructions are given on eCampus in the experiment folders. It is very important that you have access to Microsoft Word. You can download Word for free, using your DCCCD account.

A lab schedule is given in the eCampus Lab Community calendar. Plan to complete approximately one lab per week. Do not wait until the end of the semester to submit all of your labs at once: your instructor will not grade them, and you will earn zeros for labs submitted late.

**Lab Grade Policy**

**IMPORTANT:** Since you will receive a single transcripted grade for both lecture and lab, you must earn an overall grade of 70% for the lab portion of this course, in order to pass the class. Failure to complete and submit any lab, will result in a grade of zero for that lab, and could jeopardize your chances of passing the lecture portion of the class.

**Late Work Policy**

**Other Course Policies**

**Institutional Policies**

Institutional Policies include information about tutoring, Disabilities Services, class drop and repeat options, Title IX, and more.

**Course Schedule**

Detailed lecture and lab schedules can be found in the eCampus course calendar. Refer to the eCampus lecture and lab calendars regularly to check due dates for assignments, tests and labs etc. Any changes made to the lecture or lab schedules will be reflected in the eCampus calendar.

Weekly to do list

- Read the chapter in the textbook
- Watch the lecture videos
• Read the Powerpoint and complete all of the examples and skill-builders
• Refer to handouts for the salient points in the chapter (useful when reviewing for the test!)
• Complete the worksheets and check your answers against the keys
• Complete the end of chapter questions in the textbook for extra practice (answers to the odd questions are at the back of the book)
• Complete and submit the Sapling online homework (10 points per chapter)

Course Schedule

<table>
<thead>
<tr>
<th>Lecture Topic</th>
<th>Readings &amp; Assignments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>Chapter 1</td>
</tr>
<tr>
<td>Measurement and Problem Solving</td>
<td>Chapter 2</td>
</tr>
<tr>
<td>Matter and Energy</td>
<td>Chapter 3</td>
</tr>
<tr>
<td>Atoms and Elements</td>
<td>Chapter 4</td>
</tr>
<tr>
<td>Test 1</td>
<td>Chapters 2 - 4</td>
</tr>
<tr>
<td>Molecules and Compounds</td>
<td>Chapter 5</td>
</tr>
<tr>
<td>Chemical Composition</td>
<td>Chapter 6</td>
</tr>
<tr>
<td>Chemical Reactions</td>
<td>Chapter 7</td>
</tr>
<tr>
<td>Test 2</td>
<td>Chapters 5 - 7</td>
</tr>
<tr>
<td>Quantities in Chemical Reactions</td>
<td>Chapter 8</td>
</tr>
<tr>
<td>Electrons in Atoms and the Periodic Table</td>
<td>Chapter 9</td>
</tr>
<tr>
<td>Chemical Bonding</td>
<td>Chapter 10</td>
</tr>
<tr>
<td>Test 3</td>
<td>Chapters 8 - 10</td>
</tr>
<tr>
<td>Gases</td>
<td>Chapter 11</td>
</tr>
<tr>
<td>Liquids, Solids and Intermolecular Forces</td>
<td>Chapter 12</td>
</tr>
<tr>
<td>Solutions</td>
<td>Chapter 13</td>
</tr>
<tr>
<td>Test 4</td>
<td>Chapters 11 - 13</td>
</tr>
<tr>
<td>Acids and Bases</td>
<td>Chapter 14</td>
</tr>
<tr>
<td>Comprehensive Final Exam</td>
<td>Chapters 2 - 14</td>
</tr>
</tbody>
</table>

The guidelines and class schedule in this syllabus may be changed, deleted, or amended at any time verbally in class.