CHEM 1405 Introductory Chemistry I
Fall 2020 Syllabus
Dallas College – Brookhaven Campus

Instructor Information
Name: Dr. Gbenga A. Oyedepo (aka Dr. O.)
DCCCD Email: GOyedepo@dcccd.edu
I will respond within 24-48 hours. However, over the weekend and holiday periods responses may be delayed.

Office Location: X3040B
Office Phone: 972-860-4767

Virtual Office Hours: Tuesday (1pm – 3pm), Thursday (1pm – 3pm) and Friday (1pm – 2pm).

Virtual Office Hour Link: https://dcccd.webex.com/meet/goyedepo
Division Office and Phone: K224, 972-860-4750, Virtual Division Office

Course Information
Course Title: Introductory Chemistry I
Course Number: CHEM 1405
Section Number: 21502
Semester/Year: Fall 2020
Credit Hours: 4
Class Meeting Time/Location: Fully Online
Certification Date: 09/05/2020
Last Day to Withdraw: 11/12/2020
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

Note: students MAY NOT transfer both CHEM 1405 and CHEM 1411.

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](dcccd.edu/included).

**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 800 pts (80%) of final grade. Lab is 200 pts (20%) of final grade.*

**Summary of Graded Work**

<table>
<thead>
<tr>
<th>Assignments</th>
<th>Percentage of Final Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Three Mid-term Exams @ 165 pts</td>
<td>49.5%</td>
</tr>
<tr>
<td>Cumulative Final Exam</td>
<td>16.5%</td>
</tr>
<tr>
<td>Sapling Online Homework</td>
<td>14.0%</td>
</tr>
<tr>
<td>Laboratory</td>
<td>20.0%</td>
</tr>
<tr>
<td>Total Extra Credit</td>
<td>4.3%</td>
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</tbody>
</table>

**Final Grade**
<table>
<thead>
<tr>
<th>Points</th>
<th>Letter Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>≥ 895</td>
<td>A</td>
</tr>
<tr>
<td>795 – 894</td>
<td>B</td>
</tr>
<tr>
<td>695 – 794</td>
<td>C</td>
</tr>
<tr>
<td>595 – 694</td>
<td>D</td>
</tr>
<tr>
<td>&lt; 595</td>
<td>F</td>
</tr>
</tbody>
</table>

**Description of Graded Work**

**Online Homework:** Homework assignments are electronic and are taken via Sapling Learning (https://www.saplinglearning.com/ibiscms/login/).
- Every chapter has an online homework assignment.
- The homework assignment for Chapter 1 is a “Math Review” exercise.
- The “Practice Assignment” is worth 5 points of extra credit.
- Each homework assignment is worth 10 points.
- Assignments composed of one math review and thirteen homework which equates to 140 points, or 14% of your total grade. **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.**
- A link to Sapling Learning is given in the left-hand menu of the eCampus lecture course and a link to the homework assignments 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.
- Information on how to access and create a Sapling Learning account is provided in the file “How to Enroll in Sapling Online Homework” or by clicking here. (https://macmillan.force.com/macmillanlearning/s/article/Sapling-Learning-Registering-for-courses).
- Homework is "open book" but please work alone.
- Homework due dates are given in the eCampus Course Calendar.
- As well as the graded homework assignments, Sapling Learning also has activities, videos, and online "labs" available for many of the chapters. These are optional and are not graded, however they are strongly recommended as valuable practice activities.

**Mid-Term Tests and Final Exam:** Tests will be administered via eCampus, and will be located under the unit folders, in the Course Content
area. Tests will be true/false and multiple choice. You may use scratch paper to work out calculations etc, but you may not refer to your notes, phone, google or textbook etc, during the test.

**Extra Credits:** There are opportunities for extra credit in this course.

- Photo/Biography blog posting. The link can be found under the “Course Content” button. **Must be completed by the deadline** posted in the schedule to receive 10 points extra credit.
- You may participate in the “Periodic Table of Elements” project. Details of the project is available on eCampus in Unit 4 of Course Content area. Submission of a well-researched quality project will earn up to 15 points extra credit.
- Each online chapter folder (except Chapter 1) contains a short “mini quiz” on the materials covered in the previous chapter. Each mini quiz is worth 1 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.

eCampus Information

This class uses eCampus ([http://ecampus.dcccd.edu/](http://ecampus.dcccd.edu/)). Login to eCampus using your DCCCD account e.g.: e9876543@student.dcccd.edu. If you have trouble logging in, please contact Technical Support on the web or by phone at 1-866-374-7169 or 972-669-6402.

Once you have logged in to eCampus, please make sure that your email address is correct in the system. If I cannot contact you via email, you will miss important information. To check that your email is correct, click on the “My DCCCD“ tab at the top of the eCampus screen, then click on “Personal Information“ under “Tools” at the left-hand-side of the screen then “Edit Personal Information”.

Once you have logged in and verified your email address, access the CHEM 1405 course by clicking on the “Courses” tab at the top of the screen and then selecting **2020FA-CHEM-1405-21502.** Spend some time familiarizing yourself with eCampus by clicking on the buttons to the left of the course screen. Lecture material and tests can be found under the "Course Content" button.

**Suggested weekly to do list:**

- Watch the lecture videos
- Read the chapters in the textbook
- Read the Powerpoint and complete all of the examples
- 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
• Complete and submit any extra credit due

Late Work Policy
No late assignments will be accepted. If the deadline is to be extended for any test or assignment, two conditions must be met. You need to inform me prior to the deadline of the test/assignment, and pertinent documentation must be provided. I will evaluate the documentation and give you my response within 24 hours.

Institutional Policies
Institutional Policies relating to this course can be accessed using the link below. These policies include information about tutoring, Disabilities Services, class drop and repeat options, Title IX, and more.

Brookhaven Institutional Policies
(http://www.brookhavencollege.edu/syllabipolicies)

Course Schedule

<table>
<thead>
<tr>
<th>Assignments/Lecture Topics</th>
<th>Due Date (all are due by 11:59pm)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Unit 1 (8/24/2020 – 9/29/2020)</strong></td>
<td></td>
</tr>
<tr>
<td>Read the syllabus.</td>
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</tr>
<tr>
<td>Post photo and short bio.</td>
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</tr>
<tr>
<td>Read and watch the lecture videos on:</td>
<td></td>
</tr>
<tr>
<td>1. The Chemical World</td>
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<tr>
<td>2. Measurement and Problem Solving</td>
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<tr>
<td>3. Matter and Energy</td>
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<tr>
<td>4. Atoms and Elements</td>
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<tr>
<td>Sapling online <strong>math review &amp; homework #2, #3 and #4</strong> are due.</td>
<td></td>
</tr>
<tr>
<td><strong>Exam 1 (chapters 1-4)</strong></td>
<td></td>
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<tr>
<td>Available: <strong>S, 9/26/2020</strong></td>
<td></td>
</tr>
<tr>
<td>Due: <strong>T, 9/29/2020</strong></td>
<td></td>
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<tr>
<td><strong>Unit 2 (9/30/2020 – 10/27/2020)</strong></td>
<td></td>
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<tr>
<td>Read and watch the lecture videos on:</td>
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<tr>
<td>5. Molecules and Compounds</td>
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<tr>
<td>6. Chemical Composition</td>
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<tr>
<td>7. Chemical Reactions</td>
<td></td>
</tr>
<tr>
<td>Assignments/Lecture Topics</td>
<td>Due Date (all are due by 11:59pm)</td>
</tr>
<tr>
<td>-----------------------------</td>
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</tbody>
</table>
| 8. Quantities in Chemical Reactions  
9. Electrons in Atoms and the Periodic Table |  |
| Sapling online homework #5, #6, #7, #8 and #9 are due. | Every Friday |
| Exam 2 (chapters 5-9) | Available: S, 10/24/2020  
Due: T, 10/27/2020 |
| **Unit 3 (10/28/2020 – 11/24/2020)** |  |
| Read and watch the lecture videos on: 10. Chemical Bonding  
11. Gases  
12. Liquids, Solids, and Intermolecular Forces  
13. Solutions |  |
| Sapling online homework #10, #11, #12 and #13 are due. | Every Friday |
| Exam 3 (chapters 10-13) | Available: S, 11/21/2020  
Due: T, 11/24/2020 |
| Read and watch the lecture videos on: 14. Acids and Bases |  |
| Extra Credit Project | F, 12/4/2020 |
| Sapling online homework #14 is due. | F, 12/4/2020 |
| **Final, Exam 4** (comprehensive, chapters 1 - 14) | Available: U, 12/6/2020  
Due: W, 12/9/2020 |

**Questions?**

If you would like to ask me a question directly, you can send an email to G0yedepo@dcedc.edu. My contact information is given under the “Contact Dr. O.” button on eCampus. I will also be holding regular virtual office hours (Tuesday, Thursday and Friday @ 1pm), that you can access via the Virtual Office Hours menu button on eCampus. Please don’t hesitate to contact me if you have questions.
Dr. O. reserves the right to change, delete, or amend the guidelines and schedule in this syllabus as necessary.