CHEM 1407 Syllabus
Cedar Valley College

This is a Generic Syllabus for CHEM 1407. Your individual Syllabus Addendum will be supplemented by your instructor via ecampus once the course begins.

Instructor’s Information
Name: Kevin West
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Office Location: M225D
Office Hours: Monday 9:00 am – 1:00 pm
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Course Information
Course Title: Introductory Chemistry II
Course Number: CHEM 1407
Section Number: 38430
Semester/Year: Fall 2019
Credit Hours: 4
Lecture Meeting Time/Location: INET (Su, M, T, W, Th, F, S)
Lab Meeting Time/Location: INET (Su, M, T, W, Th, F, S)
Certification Date: 10/27/2019
Last Day to Withdraw: 11/28/2019

Course Prerequisites
One of the following must be met:

1) Developmental Reading 0093 or English as a Second Language (ESOL) 0044 or
2) have met Texas Success Initiative (TSI) Reading standard,
3) Developmental Mathematics 0305 (or higher) or the equivalent.
Course Description
This course is for non-science majors. It surveys organic chemistry and biochemistry. The reactions, syntheses, nomenclature, uses, purposes and properties of the important classes of organic and biochemical compounds are studied. (3 hrs Lecture and 3 hrs Lab)

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

Student Learning Outcomes

**For Lecture:**
1. Analyze and evaluate the chemical and physical properties of elements within the Periodic Table.
2. Describe the how/why chemical bonds form between different types of elements.
3. Determine the different types of electronic and molecular shapes for covalent (molecular) compounds.
4. Define, compare, and contrast intermolecular forces that exist between molecules.
5. Identify, compare, and contrast functional groups in chemistry.
6. Use the IUPAC rules to name chemical compounds and write chemical formulas.
7. Name, write, and draw organic molecules of various types and in various formats.
8. Classify primary, secondary, and tertiary organic molecules.
9. Classify organic molecules based on functional groups.
10. Distinguish between carbohydrates, lipids and proteins.
11. Identify the characteristics of monosaccharides, disaccharides and polysaccharides and compare/contrast their structural qualities.
12. Understand the relation between amino acids, proteins, and enzymes and their functions in biochemistry.
For Lab:
1. Demonstrate safe and proper handling of laboratory equipment and chemicals.
2. Conduct basic laboratory experiments with proper laboratory techniques.
3. Use basic/common laboratory instruments and setups to apply experimental methodologies used in the chemistry laboratory.
4. Make careful and accurate experimental observations.
5. Relate physical observations and measurements to theoretical principles.
6. Interpret laboratory results and experimental data, and reach logical conclusions.
7. Perform qualitative and quantitative analysis with experimental data as needed.

Required Course Materials

eTextbook and McGraw-Hill Connect Access Code
Principles of General Organic & Biological Chemistry; 2nd edition (required)
ConnectPlus Chemistry with LearnSmart (Access Card)
Author: Janice G. Smith
Publisher: McGraw-Hill Copyright 2015
ISBN: 9780077633653

Lab Manual:
The lab manual (for all scheduled lab activities) will be provided in eCampus. Access to these components will be available once the course officially starts.

Lab Kit:
Carolina Laboratory Lab Kit #581847
(Cedar Valley College) Chemistry 1407
Customer Service Contact: 1-800-334-5551

Please use the following link to buy your lab kit from Carolina Biological Supply immediately:
https://www.carolina.com/catalog/detail.jsp?prodId=581847

Lab Supplies:
Instructor approved protective eyewear (lab goggles) MUST be worn at all times in the laboratory. No student will be allowed to participate in lab without eye protection. (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.

Summary of Graded Work

<table>
<thead>
<tr>
<th>Assignments</th>
<th>Points</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecture Exams</td>
<td>4 @ 100 points each</td>
<td>400 points</td>
</tr>
<tr>
<td>Lab Activities</td>
<td>10 @ 30 points each</td>
<td>300 points</td>
</tr>
<tr>
<td>Lab Safety Form</td>
<td>1 @ 15 points</td>
<td>15 points</td>
</tr>
<tr>
<td>LearnSmart Assignments</td>
<td>8 @ 15 points each</td>
<td>120 points</td>
</tr>
<tr>
<td>Homework Assignments</td>
<td>8 @ 15 points each</td>
<td>120 points</td>
</tr>
<tr>
<td>Signature Assignment</td>
<td>1 @ 100 points</td>
<td>100 points</td>
</tr>
<tr>
<td><strong>TOTAL:</strong></td>
<td><strong>1055 points</strong></td>
<td></td>
</tr>
</tbody>
</table>

Final Grade

<table>
<thead>
<tr>
<th>Points</th>
<th>Percentages</th>
<th>Letter Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>949.5 – 1055.0</td>
<td>90-100%</td>
<td>A</td>
</tr>
<tr>
<td>844.0 – 949.4</td>
<td>80-89%</td>
<td>B</td>
</tr>
<tr>
<td>738.5 – 843.9</td>
<td>70-79%</td>
<td>C</td>
</tr>
<tr>
<td>633.0 – 738.4</td>
<td>60-69%</td>
<td>D</td>
</tr>
<tr>
<td>0 – 632.9</td>
<td>0-59%</td>
<td>F</td>
</tr>
</tbody>
</table>

Description of Graded Work

Lecture Exams: The exams for this course will be presented and completed through Blackboard. It is imperative that you follow ALL instructions given to ensure that you have no problems while taking your assessment(s). Your exams will be based on the material covered/presented throughout lecture, lab, and homework assignments. As such, you should expect to see multiple choice items, calculations, and free response sections to complete to the best of your academic capabilities.

Lab Safety Form: Within first 2 days of this course, students will be required to read and sign a safety contract to acknowledge ALL of the safety protocols that must be followed when conducting laboratory experiments throughout the semester.

Laboratory Activities: Each week, you will perform qualitative and/or quantitative analyses to enhance the depth and breadth of your knowledge and skills by completing hands-on laboratory experiments. In addition, lab-reports with post-lab questions will be submitted by the assigned due date. To receive credit
for all of your lab reports, you must upload the complete lab activity in a standard file extension such as: docx, pdf, png, jpeg, or any other viewable formats along with all required illustrations, post-lab questions, and supporting calculations (with work shown neatly) into eCampus from your computer (not your cell phone).

**LearnSmart Assignments:** Study modules are assigned each week through the McGraw-Hill Connect online platform to ensure that students are reading through the chapters each week in preparation for the material to be formally addressed in upcoming lectures, lab, and homework assignments. All of these assignments will be assigned and graded using the McGraw-Hill Connect online platform. As such, all students MUST purchase the access code with the textbook to complete these assignments each week.

**Homework Assignments:** In order to ensure that students have the opportunity to build on what they learn from lecture and lab sessions, students will complete various problems assigned by the instructor each week as homework. All of your homework assignments will be assigned and graded using the McGraw-Hill Connect online platform. As such, all students MUST purchase the access code with the textbook to complete these assignments each week.

**Signature Assignment:** As part of your studies throughout this course, and signature assignment will be completed. For this particular course, the signature assignment will be in the form of a research paper with an over-arching topic that will be used to assess the areas of critical thinking, quantitative reasoning, and communication skills. Students will be expected to use research skills to convey specific knowledge, about their assigned topic, while also utilizing quality standards of technical writing to present their composition and data reviews. More specific information, details, rubrics, and due date can be found in the Blackboard shell designed for this course.

**Attendance and Your Final Grade**

Regular participation in ALL online lecture and laboratory activities is mandatory. The grade you receive in this course will be based on the total number of points earned from ALL exams, assignments, and activities completed correctly and submitted by the assigned due date(s).

**Late Work Policy**

There will be no additional opportunities to make-up labs or submit them beyond the assigned due date(s) unless an emergency or situation is documented, verified, validated, and approved by the instructor. As such, it is important that you purchase your lab kit immediately to ensure that you have it prior to the first day of this course. Make-up exams (or late submissions) will not permitted due to the fast-pace delivery of all instructional content. Make-up exams are permitted only if missed due to an extenuating circumstance (i.e. major illness, accident, death of a family member, birth of your child), which must be documented, verified, and submitted to the course instructor within 24 hours of the due date. The instructor MUST also be notified either by email, phone, or in person (via scheduled appointment) before any consideration(s) will be made.
CHEM 1407 Course Outline

For maximum success in this course you should spend a **minimum** of 9 hours per week working on course material.

<table>
<thead>
<tr>
<th>Weeks</th>
<th>Due Dates</th>
<th>Chapters</th>
<th>Learn Smart, Homework Assignments, and Exams</th>
<th>Complete the following Lab Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>10/22</td>
<td>NA</td>
<td>Introduction/Sign up for McGraw-Hill Connect</td>
<td>Sign Lab Safety Form and Upload on eCampus</td>
</tr>
<tr>
<td></td>
<td>10/25</td>
<td>3</td>
<td>LearnSmart: Ionic and Covalent Compounds</td>
<td>Lab #1: Introduction to Graphing</td>
</tr>
<tr>
<td>2nd</td>
<td>10/28</td>
<td>3</td>
<td>Homework: Ionic and Covalent Compounds</td>
<td>Lab #2: Introduction to Molecules</td>
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<tr>
<td></td>
<td>10/31</td>
<td>10</td>
<td>LearnSmart: Introduction to Organic Molecules</td>
<td></td>
</tr>
<tr>
<td>3rd</td>
<td>11/04</td>
<td>10</td>
<td>Homework: Introduction to Organic Molecules</td>
<td>Lab #3: Isomers and Nomenclature</td>
</tr>
<tr>
<td></td>
<td>11/06</td>
<td>11</td>
<td>LearnSmart: Unsaturated Hydrocarbons</td>
<td></td>
</tr>
<tr>
<td></td>
<td>11/08</td>
<td>11</td>
<td>Homework: Unsaturated Hydrocarbons</td>
<td>Lab #4: Intermolecular Forces Lab</td>
</tr>
<tr>
<td>4th</td>
<td>11/10</td>
<td>3, 10, &amp; 11</td>
<td></td>
<td>Exam I</td>
</tr>
<tr>
<td></td>
<td>11/13</td>
<td>12</td>
<td>LearnSmart: Organic Compounds that Contain Oxygen, Halogens, or Sulfur</td>
<td></td>
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<tr>
<td></td>
<td>11/16</td>
<td>12</td>
<td>Homework: Organic Compounds that Contain Oxygen, Halogens, or Sulfur</td>
<td>Lab #5: Synthesis of Biodiesel</td>
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<tr>
<td>5th</td>
<td>11/18</td>
<td>13</td>
<td>LearnSmart: Carboxylic Acids, Esters, Amines, and Amides</td>
<td></td>
</tr>
<tr>
<td></td>
<td>11/21</td>
<td>13</td>
<td>Homework: Carboxylic Acids, Esters, Amines, and Amides</td>
<td>Lab #6: Qualitative Synthesis of Aspirin</td>
</tr>
<tr>
<td></td>
<td>11/23</td>
<td>12 &amp; 13</td>
<td></td>
<td>Exam II</td>
</tr>
<tr>
<td>6th</td>
<td>11/25</td>
<td>14</td>
<td>LearnSmart: Carbohydrates</td>
<td></td>
</tr>
<tr>
<td></td>
<td>11/27</td>
<td>14</td>
<td>Homework: Carbohydrates</td>
<td>Lab #7: Fermentation of Sugar</td>
</tr>
<tr>
<td>7th</td>
<td>12/01</td>
<td>15</td>
<td>LearnSmart: Lipids</td>
<td></td>
</tr>
<tr>
<td></td>
<td>12/03</td>
<td>15</td>
<td>Homework: Lipids</td>
<td>Lab #8: Saponification of Fatty Acids</td>
</tr>
<tr>
<td></td>
<td>12/06</td>
<td>14 &amp; 15</td>
<td></td>
<td>Exam III</td>
</tr>
</tbody>
</table>
Institutional Policies

Institutional Policies relating to this course can be accessed using the link below. These policies include information about tutoring, Disabilities Services, course drop/repeat options, Title IX, and much more. Cedar Valley Institutional Policies (http://www.cedarvalleycollege.edu/syllabipolicies)

Disclaimer

The instructor reserves the right to amend this syllabus as necessary.

McGRAW-HILL CONNECT PLUS ACCESS CODE

Getting Started

To get started in Connect, you will need the following:

A link to Your instructor’s Connect Web Address:


Use the Connect Access Code to log in, or use a Credit Card to Buy an Access Code Online.

A "Start Free Trial" registration option allows you to register in Connect without purchasing an access code and receive full access (typically for three weeks) before being required to get one. This option is helpful for those awaiting financial aid or a textbook in the bookstore, those who may drop the class and those who try the Connect Plus eBook before they buy.

If using the free trial, be sure to get full access to Connect before the trial period expires to avoid any delays in completing your coursework. If your trial period does expire, your work will be saved. Just login with the username and password you used to create your Connect account and choose to “purchase full Connect access here.”
Registration and Sign In

1. Go to the following Connect Web Address provided by your instructor.


2. Click on “Register Now.”
3. Enter your email address (this will become your Connect username). As a best practice, you may want to register with your school/institution email address.

   **TIP:** If you already have a McGraw-Hill account, you will be asked for your password and will not be required to create a new account.

4. Enter a registration code or choose “Buy Online” to purchase access online.
5. Follow the on-screen directions.

   **TIP:** Please choose your Security Question and Answer carefully. We will ask you for this information if you forget your password. We recommend that you provide a secondary email address should you forget your Security Question and Answer.

6. When your registration process is complete, click on “Go to Connect Now.”
7. You are now ready to use Connect to access and complete your assignments.