Hazard Community and Technical College
Course Syllabus (4 weeks)

CHE 170 4192-45Z3 (4738): General College Chemistry I Lab Summer 2019 Online

Instructor Contact Information

Instructor Name/Title: Ramon E. Cuellar
Office Hours: By appointments

Office Location: online
Phone Number: 423-300-2756
Email Address: ramon.cuellar@kctcs.edu

Course Information

Course Description
Reinforces concepts covered in CHE 170 and introduces basic laboratory techniques, methods, and instrumentation through selected experiments. Emphasizes both quantitative and qualitative techniques.

Prerequisites
CHE 170

Start Date: 6-3-19
Midterm/Last Date to Withdraw Without Instructor Permission: 6-17-19
Last Date to Withdraw with Instructor Approval: 6-28-19

Textbook Information and Supplies

   NOTE: The above book is included in the cost of the course. There is nothing separate you need to purchase.
2. A Scientific Calculator (cell phones turned long ways have this function)

Course Competencies/Student Learning Outcomes

1. Demonstrate an understanding of general chemistry, including stoichiometry, atomic structure, properties of matter and the relationship between molecular structure and chemical behavior.
2. Evaluate and interpret numerical, chemical, and general scientific information.
3. Apply information from other areas of study (such as mathematics and physics) to facilitate their understanding and manipulation of fundamental chemical theories.
4. Analyze and solve chemical problems.
5. Relate chemical concepts to daily life.

General Education Course Competencies/Student Learning Outcomes

*Natural Sciences (NS)*

1. Demonstrate an understanding of the methods of science inquiry.
2. Explain basic concepts and principles in one or more of the sciences.
3. Apply scientific principles to interpret and make predictions in one or more of the sciences.
4. Explain how scientific principles relate to issues of personal and/or public importance.

**Course Structure, Evaluation, and Grading Methods**

This course is arranged in four units. Each unit consists of 2-3 chapters. Each chapter has two assignments, a LearnSmart Lesson, and a study guide. Video lectures are included with each chapter. These lectures cover the content of the chapter but are not specific to the textbook used in this course. Once a unit is completed, there will be a unit exam. After all, four units are complete, there will be a comprehensive final.

**Descriptions of Graded Assignments**

*LearnSmart Lesson:* This will guide you through the reading of the chapter and ask you questions to reinforce what you have learned.

*Chapter Study Guide:* This will present you with material that you are expected to know for the unit and final exams. Guided Solutions are available for most problems, and this assignment may be repeated as many times as you like.

*Unit Exam:* This is a timed (120 min), two attempt exam with 60 questions covering the 2-3 chapters within the unit. The timer begins when you start the unit exam and does not stop if you exit out.

*Final Exam:* This is a timed (120 min), single attempt exam with 60 questions covering the four units. The timer begins when you start the final exam and does not stop if you exit out.

There is no Extra Credit in this course.

A *Midterm Grade* is given to you as an indicator of your progress for the material due at the midterm. This grade should not be taken to be equivalent to your final grade as you still have 50% or more of the assignments left to complete before the term is finished.

It is estimated you will spend approximately 3-5 hours per chapter studying and completing assignments in this course.

**All assignments are due by the end of Day on their specified due date.**

<table>
<thead>
<tr>
<th>Grading Summary</th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>UNIT 1</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assignment</td>
<td>Points</td>
<td>Due Date</td>
</tr>
<tr>
<td>Chapter 1 LearnSmart</td>
<td>100</td>
<td>6/8</td>
</tr>
<tr>
<td>Chapter 2 LearnSmart</td>
<td>100</td>
<td>6/8</td>
</tr>
<tr>
<td>Chapter 3 LearnSmart</td>
<td>100</td>
<td>6/8</td>
</tr>
<tr>
<td>Unit 1 Exam</td>
<td>600</td>
<td>6/8</td>
</tr>
<tr>
<td><strong>Unit 2</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chapter 4 LearnSmart</td>
<td>100</td>
<td>6/15</td>
</tr>
<tr>
<td>Chapter 5 LearnSmart</td>
<td>100</td>
<td>6/15</td>
</tr>
<tr>
<td>Chapter 6 LearnSmart</td>
<td>100</td>
<td>6/15</td>
</tr>
<tr>
<td>Unit 2 Exam</td>
<td>600</td>
<td>6/15</td>
</tr>
<tr>
<td><strong>Unit 3</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Grading Summary**

<table>
<thead>
<tr>
<th>UNIT 1 Assignment</th>
<th>Points</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chapter 7 LearnSmart</td>
<td>100</td>
<td>6/22</td>
</tr>
<tr>
<td>Chapter 8 LearnSmart</td>
<td>100</td>
<td>6/22</td>
</tr>
<tr>
<td>Chapter 9 LearnSmart</td>
<td>100</td>
<td>6/22</td>
</tr>
<tr>
<td>Unit 3 Exam</td>
<td>600</td>
<td>6/22</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>UNIT 4 Assignment</th>
<th>Points</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chapter 10 LearnSmart</td>
<td>100</td>
<td>6/29</td>
</tr>
<tr>
<td>Chapter 11 LearnSmart</td>
<td>100</td>
<td>6/29</td>
</tr>
<tr>
<td>Unit 4 Exam</td>
<td>600</td>
<td>6/29</td>
</tr>
<tr>
<td>Final Exam</td>
<td>900</td>
<td>7/1 Will open on this day only (8 am to 11:59 pm)</td>
</tr>
</tbody>
</table>

LearnSmart assignments are Multiple Choice. Exams have mixed question types. **7/1 is the last day to submit assignments.**

**GRADING SCALE:**
- 90% -100% = A
- 80% - 89% = B
- 70% - 79% = C
- 60% - 69% = D
- Below 60% = E

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**Grading Policy/Scale**

**Grading Summary**

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Number</th>
<th>Points Per</th>
<th>Total</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>LearnSmart</td>
<td>11</td>
<td>100</td>
<td>1100</td>
<td>Becomes unavailable after due date</td>
</tr>
<tr>
<td>Study Guide</td>
<td>11</td>
<td>100</td>
<td>1100</td>
<td>No penalty for late assignment; highest grade taken</td>
</tr>
<tr>
<td>Unit Exam</td>
<td>4</td>
<td>600</td>
<td>2400</td>
<td>2% per day penalty for late exams, 2 attempts per exam</td>
</tr>
<tr>
<td>Final Exam</td>
<td>1</td>
<td>900</td>
<td>900</td>
<td>Becomes unavailable after due date; 1 attempt</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td></td>
<td></td>
<td><strong>5500</strong></td>
<td></td>
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**Class Policies/Procedures**

**Inclement Weather Class Policy/Procedure**
During periods of inclement weather, HCTC will either open at 11:00 or be closed. On days that HCTC opens at 11:00 a.m., all courses scheduled **BEFORE 11:00 a.m., will be canceled.** Decisions
regarding evening classes will be made by 4:00 p.m. Check local radio, TV stations, or the HCTC website for information. Weather related situations will be evaluated on an individual basis.

**General Class Make-up, Late Assignment Class Policy/Procedure**

Though there are specific due dates for the course, all assignments are available to the course start date, and it is in your best interest to not wait until the last minute to do the course work. You are even encouraged to work ahead when possible. Policies regarding late assignments are listed above in the “Descriptions of Graded Assignments” section. Exceptions, including those that are weather-related, will be considered on a case by case basis. No assignments will be accepted after **11:59 pm Eastern on June 28th, 2019**.

**Attendance Class Policy/Procedure**

As this is a web-based class, there is no formal attendance; however, students are expected to complete the work in the time allotted. Any student **who has not completed the Course Orientation Assignment in Blackboard by June 5th** will be reported as a “no-show” under KCTCS policy.

**Withdrawal Class Policy/Procedure**

A student may officially withdraw from any class up to and including the date of midterm with a W grade assigned to the student’s record. After midterm and through the last class day (not including the period for final), students will need instructor’s permission. Please refer to the following for instructions on request withdrawal:


**Accommodations Procedure**

HCTC recognizes that a disability may preclude a student from demonstrating required course competencies or from completing course requirements. In compliance with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990, any qualified student with disabilities may request appropriate course accommodations to ensure that full benefits are received and that the instructor is aware and can make the proper adjustments. Students are encouraged to meet with the Disability Services Representative to develop and complete an Accommodations Plan.

Julie Caudill, HCTC Disabilities Services Representative
Phone: 606-487-3486 and Email: jcaudill0129@kctcs.edu

**Appeals Process**

Always begin the informal process by talking to your instructor. If issues cannot be resolved, then talk with the Dean/Supervisor (see below for contact information) of the faculty member. For information about academic rights, academic offenses, and the student’s formal right to appeal, review the **KCTCS Code of Student Conduct**.

**Dean/Supervisor Contact Information**

Dean/Supervisor: Leila Smith  
Office Location: Smith Admin 101A, Lees College Campus  
Phone Number: 606.487.3504  
Email Address: Leila.smith@kctcs.edu
Approved Course Outline:

I. Definition of Chemistry
   A. History
   B. Scientific method

II. Measurement
   A. Metric system
   B. Density
   C. Temperature
   D. Significant figures
   E. Precision and accuracy
   F. Exponential notation
   G. Dimensional analysis

III. Matter
   A. States of matter
   B. Classification of matter
   C. Properties of matter
   D. Physical and chemical changes
   E. Atomic theory
   F. Formulas and Nomenclature of substances

IV. Atomic Theory and the Periodic Table
   A. Fundamental particles
   B. Isotopes
   C. Quantum theory and electronic structure
   D. Periodic table and trends

V. Chemical Bonding
   A. Ionic and covalent bonds
   B. Electron dot structures
   C. Electronegativity
   D. Shapes and polarities of molecules
   E. Hybrid orbitals

VI. Chemical Reactions
   A. Balancing equations
   B. Types of reactions
   C. Net ionic equations
   D. Redox equations

VII. Mole Calculations with Formulas and Equations
   A. Atomic and molecular weights
   B. Mass-mole conversions
   C. Percentage composition
   D. Empirical and molecular formula
   E. Stoichiometry
   F. Limiting reagents and percentage yields
   G. Solution Stoichiometry

VIII. Gases
   A. Gas laws
   B. Stoichiometry with gasses
   C. Kinetic molecular theory
IX. Solids and liquids
   A. General properties
   B. Changes of state
   C. Intermolecular attractions
   D. Types of solids
   E. Phase diagrams

X. Thermochemistry
   A. Temperature and heat
   B. Energy and units
   C. Calorimetry
   D. Enthalpy and enthalpy changes
   E. Hess's law

Plagiarism Policy:
Students are expected to submit their work in their words or site sources by ACS standards
(http://library.williams.edu/citing/styles/acs.php).

Additional Syllabus Information:
Review the HCTC Website: (from HCTC Website Click Current Students > Academic Resources > Syllabus Information)

Print Version of URLs listed in the syllabus:
Academic Calendar: https://hazard.kctcs.edu/education-training/academic-calendar/index.aspx
HCTC Syllabus Website: https://hazard.kctcs.edu/current-students/academic-resources/syllabus_information.aspx
Student Code of Conduct: https://kctcs.edu/current-students/academic-resources/code-of-student-conduct.aspx