GENERAL CHEMISTRY II  
CHEM.1412.66400  
SUMMER II 2019  
07/08/2019 THRU 08/08/2019

PROFESSOR: Jesse Fox  
EMAIL: jfox@dcccd.edu  
OFFICE PHONE: 214-860-8653/214-860-3653  
OFFICE NUMBER: H 125  
OFFICE HOURS: UPON REQUEST  
MEETING DAYS AND TIME: LEC MTWRFSSU  
LAB MTWRFSSU  
ROOM NUMBER: LEC INET  
LAB INET  
CREDIT HOURS: 4

DIVISION: SCIENCE, TECHNOLOGY, ENGINEERING & MATHEMATICS AND PHYSICAL EDUCATION  
DEAN: STEPHEN JONES  
DIVISION OFFICE PHONE: 214-860-8649  
DIVISION OFFICE NUMBER: H 34

COURSE DESCRIPTION: This course is for science and science-related majors. Fundamental concepts of chemistry are presented including measurement and the metric system, the history of chemistry, the mole concept, chemical reactions and stoichiometry, energy and chemical reactions, states and properties of matter, the periodic table, chemical bonding, atomic and molecular structure, gas laws, and concentrations of solutions. (3 Lec., 3 Lab.)

COURSE PRE-REQUISITES: MATH 1314 or equivalent. High school chemistry is strongly recommended.

COURSE MATERIALS: Brown, LeMay, Bursten, Murphy, Woodward & Stoltzfus  

CHEMISTRY KITS NEED TO BE PURCHASED BY CAROLINA BIOLOGICAL LINK WILL BE FORTHCOMING FOR LAB KITS AND WILL BE SHARED ON ECAMPUS.DCCCD.EDU.

http://www.carolina.com/catalog/detail.jsp?prodId=581561

SOME OF THE LABS ARE ALSO LOCATED AT OKLAHOMA STATE UNIVERSITY AT http://genchem1.chem.okstate.edu/CCLI/CCLIDefault.html
STATE REQUIREMENTS:

COURSE OBJECTIVES

The objective of the study of a life and physical sciences component of the core curriculum is the focus on describing, explaining, and predicting natural phenomena using scientific method. Courses involve the understanding of interactions among natural phenomena and the implications of scientific principles on the physical world and on human experiences.

Required Core Objectives for Chemistry are as follows:

- Critical Thinking
- Communication
- Empirical and Quantitative Skills
- Teamwork

For 2018-2019, Chemistry will evaluate and assess the following Core Objectives:

- Critical Thinking
- Communication
- Teamwork

The following science courses include the above core objectives: Biology 1406, 1407, 1408, 1409, 1411, 2401, 2402, 2406, 2416, 2420, 2421; Chemistry 1405, 1406, 1407, 1411, 1412, 2425; 2425 Geology 1401, 1402, 1403, 1404, 1405, 1445, 1447; Physics 1401, 1402, 1403, 1404, 1405, 1407, 1415, 1417, 2425, and 2426.

STUDENT LEARNING OUTCOME

STUDENT LEARNING OUTCOMES FOR DISCIPLINE OF CHEMISTRY

Students in lecture will be able to:

1. State the characteristics of liquids and solids, including phase diagrams and spectrometry.
2. Articulate the importance of intermolecular interactions and predict trends in physical properties.
3. Identify the characteristics of acids, bases, and salts, and solve problems based on their quantitative relationships.
4. Identify and balance oxidation-reduction equations, and solve redox titration problems.
5. Determine the rate of a reaction and its dependence on concentration, time, and temperature.
6. Apply the principles of equilibrium to aqueous systems using LeChatelier’s Principle to predict the effects of concentration, pressure, and temperature changes on equilibrium mixtures.
7. Analyze and perform calculations with the thermodynamic functions, enthalpy, entropy, and free energy.
8. Discuss the construction and operation of galvanic and electrolytic electrochemical cells, and determine standard and non-standard cell potentials.
10. Describe basic principles of organic chemistry and descriptive inorganic chemistry.
11. Demonstrate their ability to represent chemistry artistically, either through presentation, poster or art form.

Students in lab will be able to:

1. Use basic apparatus and apply experimental methodologies used in the chemistry laboratory.
2. Demonstrate safe and proper handling of laboratory equipment and chemicals.
3. Conduct basic laboratory experiments with proper laboratory techniques.
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. Record experimental work completely and accurately in laboratory notebooks and communicate experimental results clearly in written reports.
8. Design fundamental experiments involving principles of chemistry and chemical instrumentation.
9. Identify appropriate sources of information for conducting laboratory experiments involving principles of chemistry.
STUDENT LEARNING OUTCOMES FOR AA & AS DEGREE PROGRAM

Student will be able to:

1. Reason logically to solve social, political, economic, scientific, quantitative, or personal problems.
2. Communicate ideas (aurally, orally, and in writing) with clarity, logic, proper grammar, and appropriateness for audience and occasion.
3. Employ reading strategies to demonstrate learning, to analyze information, to formulate judgments, and to make recommendations.
4. Apply research skills necessary to retrieve and evaluate information.
5. Demonstrate scientific reasoning to solve problems. (AS Degree only)

COURSE OUTLINE

Instructor Attendance Policy:

Students are expected to attend all classes. Students have the responsibility to attend class and to consult with the instructor when an absence occurs. If for some reason you must leave class early, you should inform the instructor prior to the start of class of your reason for leaving early.

Students must begin attendance in all classes of enrollment. No exceptions. Financial Aid will not be granted to students who have been certified as not attending, by the certification date. For this lecture course, your physical participation in class, on or before the certification date will allow you to receive credit for FA purposes. For certification dates, check with the division or FAO for further information. Students, who are not certified as beginning class, are responsible for any payments due as a result of non-certification, to include the dropping of courses.

CHEMISTRY 1412 COURSE CONTENT

Chapter 7
KINETICS

Chapter 8
CHEMICAL EQUILIBRIUM

Chapter 9
ACID-BASE EQUILIBRIA

Chapter 10
ELECTROCHEMISTRY

Chapter 11
CHEMISTRY OF COORDINATION CHEMISTRY

Chapter 12
ORGANIC CHEMISTRY

HOMEWORK AND EXAM DATES WILL BE GIVEN IN CLASS. THERE WILL BE NO MAKE UP WORK WITHOUT SUFFICIENT PROOF OF ABSENCE.

ASSESSMENT

**Exams and Assignments:**

The final grade for the course is based on the grade scale shown above. There are no exceptions to this grade scale.

The total points are based on the following:

<table>
<thead>
<tr>
<th>Points</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>51.0</td>
<td>EXAMS</td>
</tr>
<tr>
<td>24.0</td>
<td>LAB REPORTS</td>
</tr>
<tr>
<td>10.0</td>
<td>COMPREHENSIVE FINAL LAB EXAM</td>
</tr>
<tr>
<td>5.0</td>
<td>DISCUSSIONS</td>
</tr>
<tr>
<td>10.0</td>
<td>COMPREHENSIVE FINAL LECTURE EXAM</td>
</tr>
<tr>
<td>3.0</td>
<td>COMPREHENSIVE QUIZZES* (EXTRA CREDIT)</td>
</tr>
</tbody>
</table>

**FINAL EXAM**

The final exam will be a standardized test compiled by the American Chemical Society. This tool will assess your overall chemistry knowledge of this course. A mastery of 60% or above is acceptable and the paradigm.

**LAB**

*All students must score 70% on lab safety exam.* If score is less than 70%, student must retake safety exam. No student will be allowed to work in the lab unless 70% mastery is achieved. Labs for Excel graphing will be specially assessed to test your graphing ability. A mastery of 60% or above is acceptable and the paradigm.
LAB FINAL EXAM
Questions will be specifically assessed to determine your laboratory knowledge, one of which will be on Excel graphing exercise. A mastery of 60% or above is acceptable and the paradigm.

Individual and Group Project
Every student is assigned a project to be turned in or conveyed before the end of course. Students will also be assigned to cooperative learning groups and special project assigned to be turned in as a group project.

Grades will be assessed on basis of creativity, originality, neatness and accuracy with an assessment form administered by the Chemistry department. A mastery of 60% or above is acceptable and the paradigm.

Quizzes
Quizzes are given at the discretion of the instructor, and could be calculated into overall grade.

GRADING SCALE

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>A</td>
<td>100 TO 89.5</td>
</tr>
<tr>
<td>B</td>
<td>&lt;89.5 TO 79.5</td>
</tr>
<tr>
<td>C</td>
<td>&lt;79.5 TO 64.9</td>
</tr>
<tr>
<td>D</td>
<td>&lt;64.9 TO 59.5</td>
</tr>
<tr>
<td>F</td>
<td>&lt;59.5 TO 0</td>
</tr>
</tbody>
</table>

COLLEGE SPONSORED EVENT: NONE.
ELECTRONIC DEVICES: Not Applicable
The withdraw date for this class is JULY 30, 2019
Census date is JULY 11, 2019.

Academic Dishonesty: (edit if needed)
Students that caught plagiarizing an assignment will be subject to an "F" in the course and possible expulsion from the college.

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. Scholastic dishonesty includes, but is not limited to, cheating on a test, plagiarism, and collusion. As a college student, you are considered a responsible adult. Your enrollment indicates acceptance of the DCCCD Code of Student Conduct published in the DCCCD Catalog. More information is available at https://www1.dcccd.edu/catalog/ss/code.cfm.

INSTITUTIONAL POLICIES
Repeating This Course:
Effective for Fall Semester 2005, the Dallas County Community Colleges will charge additional tuition to students registering the third or subsequent time for a course. This class may/may not be repeated for the third or subsequent time without paying the additional tuition. Third attempts include courses taken at any of the Dallas County Community Colleges since the Fall 2002 semester. More information is available at: https://www1.dcccd.edu/cat0506/ss/oep/third_attempt.cfm

Your laboratories must be your original work. Any collusion, plagiarism, and/or intent to submit work dishonestly, and/or not your intellectual property, will be dealt with severely, and could result in a grade of zero or dismissal from the course.

Academic Dishonesty:
Students that caught plagiarizing an assignment will be subject to an "F" in the course and possible expulsion from the college. 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. Scholastic dishonesty includes, but is not limited to, cheating on a test, plagiarism, and collusion. As a college student, you are considered a responsible adult. Your enrollment indicates acceptance of the DCCCD Code of Student Conduct published in the DCCCD Catalog. More information is available at https://www1.dcccd.edu/catalog/ss/code.cfm.

ADA Statement:
If you are a student with a disability and/or special needs who requires accommodations, please contact the college Disability Services Office. For information regarding the rights and responsibilities of students with disabilities, contact DSO at 972-260-8691 (Voice) or 972-860-3651 (TDD).

Religious Holidays:
Absences for observance of a religious holy day are excused. A student whose absence is excused to observe a religious holy day is allowed to take a make-up examination or complete an assignment within a reasonable time after the absence.
**Inclement weather:**
In the event of severe weather conditions, please listen to local radio or television stations for information concerning official closing of Mountain View College facilities. You can also call the information line at 214.860.8680, or check for updates on this web site. Decisions for evening classes will be made by 4:00 pm.  
[http://www.mountainviewcollege.edu/1weather.asp](http://www.mountainviewcollege.edu/1weather.asp)

**Final Course Grade:**
Final grades are available only on eConnect and touchtone telephone at 972-613-1818. You will need your student ID number and use your birth date as your password.  
[http://econnect.dcccd.edu/econnect/st/stmenu.html](http://econnect.dcccd.edu/econnect/st/stmenu.html)

**INSTITUTIONAL POLICIES**
Institutional policies related to this course can be accessed from the following link:  
[www.mountainviewcollege.edu/syllabipolicies](http://www.mountainviewcollege.edu/syllabipolicies).

**Disclaimer Reserving Right to Change Syllabus:**
The instructor reserves the right to amend this syllabus as necessary.

**Withdrawal Policy (with drop date):**
If you are unable to complete this course, it is your responsibility to withdraw formally. The withdrawal request must be received in the Registrar’s Office by July 30, 2019. Failure to do so will result in your receiving a performance grade, usually an "F." If you drop a class or withdraw from the college before the official drop/withdrawal deadline, you will receive a "W" (Withdraw) in each class dropped.

**COURSE SCHEDULE**
This is a tentative lecture schedule of events and is subject to change. Please refer to ecampus.dcccd.edu for all course information.

**Course Outline (Calendar):**

<table>
<thead>
<tr>
<th>DATE</th>
<th>CHAPTER 1</th>
</tr>
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<tbody>
<tr>
<td>JULY 08-JULY 14</td>
<td>KINETICS</td>
</tr>
<tr>
<td>JULY 14</td>
<td>DISCUSSION I DUE</td>
</tr>
<tr>
<td></td>
<td>LAB: SAFETY ORIENTATION (IF NEEDED) &amp; SAFETY QUIZ &amp; CHECK IN (SAFETY QUIZ ONLINE)</td>
</tr>
<tr>
<td></td>
<td>LAB 1: EXCEL GRAPHING</td>
</tr>
<tr>
<td></td>
<td>LAB 2: IODINE CLOCK REACTION (<a href="http://genchem1.chem.okstate.edu/CCLI/CCLIDefault.html">http://genchem1.chem.okstate.edu/CCLI/CCLIDefault.html</a>)</td>
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<tr>
<td></td>
<td>LAB 3: CONC AND TEMP EFFECTS (<a href="http://genchem1.chem.okstate.edu/CCLI/CCLIDefault.html">http://genchem1.chem.okstate.edu/CCLI/CCLIDefault.html</a>)</td>
</tr>
<tr>
<td>JULY 15</td>
<td>COMPREHENSIVE QUIZ FOR KINETICS &amp; CHEMICAL EQUILIBRIUM</td>
</tr>
<tr>
<td>JULY 16 ONLY</td>
<td>EXAM I-KINETICS &amp; CHEMICAL EQUILIBRIUM</td>
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<tr>
<td>JULY 16-JULY 22</td>
<td>ACID-BASE EQUILIBRIA</td>
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<td>LAB 4: EQUILIBRIUM AND LE CHATELIER’S PRINCIPLE (580336)</td>
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<tr>
<td>JULY 23</td>
<td>COMPREHENSIVE QUIZ II</td>
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<tr>
<td></td>
<td>ACID-BASE EQUILIBRIA &amp; ELECTROCHEMISTRY</td>
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<td></td>
<td>LAB 7: DETERMINATION OF ACETIC ACID CONCENTRATION IN VINEGAR USING TITRATION (580314)</td>
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<td>LAB 8: SOLUBILITY PRODUCT (580368)</td>
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<td>LAB 9: VOLTAIC CELLS (<a href="http://genchem1.chem.okstate.edu/CCLI/CCLIDefault.html">http://genchem1.chem.okstate.edu/CCLI/CCLIDefault.html</a>)</td>
</tr>
<tr>
<td>JULY 24 ONLY</td>
<td>EXAM II</td>
</tr>
</tbody>
</table>
**ACID-BASE EQUILIBRIA & ELECTROCHEMISTRY**

<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>JULY 24</td>
<td>DISCUSSION II DUE</td>
</tr>
<tr>
<td>JULY 24-JULY 30</td>
<td>CHAPTER 5</td>
</tr>
<tr>
<td></td>
<td>CHEMISTRY OF COORDINATION CHEMISTRY</td>
</tr>
<tr>
<td></td>
<td>CHAPTER 6</td>
</tr>
<tr>
<td></td>
<td>ORGANIC CHEMISTRY</td>
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<td></td>
<td>LAB 10: ACTIVITY OF METALS (<a href="http://genchem1.chem.okstate.edu/CCLI/CCLIDefault.html">http://genchem1.chem.okstate.edu/CCLI/CCLIDefault.html</a>)</td>
</tr>
<tr>
<td>JULY 31</td>
<td>COMPREHENSIVE QUIZ III</td>
</tr>
<tr>
<td></td>
<td>CHEMISTRY OF COORDINATION CHEMISTRY &amp; ORGANIC CHEMISTRY</td>
</tr>
<tr>
<td></td>
<td>LAB 11: THE FUNDAMENTALS OF CHROMATOGRAPHY INVESTIGATION(S80304)</td>
</tr>
<tr>
<td></td>
<td>LAB 12: ORGANIC WORKSHEET</td>
</tr>
<tr>
<td>AUG 01 ONLY</td>
<td>EXAM III</td>
</tr>
<tr>
<td>(ALL DAY: NO EXCPTIONS)</td>
<td>COORDINATION CHEMISTRY &amp; ORGANIC CHEMISTRY</td>
</tr>
<tr>
<td></td>
<td>(JULY 30 LAST DAY TO DROP)</td>
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<tr>
<td>AUG 03</td>
<td>LAST DAY FOR ALL LAB SUBMITTALS</td>
</tr>
<tr>
<td>AUG 05</td>
<td>DISCUSSION III DUE</td>
</tr>
<tr>
<td>AUG 05</td>
<td>COMPREHENSIVE LABORATORY FINAL EXAM (ONLINE)</td>
</tr>
<tr>
<td>AUG 05</td>
<td>COMPREHENSIVE LECTURE FINAL EXAM (ONLINE)</td>
</tr>
</tbody>
</table>

For a complete listing of MVC and DCCCD policies, refer to [http://www.tasb.org/policy/pdf/private/057501/](http://www.tasb.org/policy/pdf/private/057501/). The highlighted policies below provide partial listing off the duties, rights and responsibilities of students enrolled in MVC courses.
PLACE THIS CONTACT INFORMATION IN ITS APPROPRIATE SPACE ON ECAMPUS.DCCCD.EDU.

STUDENT CONTACT INFORMATION

Name:_______________________________________  Current E-mail Address:__________________________

Current Contact Phone Number:________________________

Contact Modalities:
SKYPE: YES or NO      FACETIME: YES or NO  Other:_______________

Initial the following acknowledging that you adhere to the statements. Any typed responses will be viewed as a signature. Sign and date at the bottom of this page.

___ I fully understand that this is an online course, that it will be rigorous and will uphold the rule of academic honesty, stating that any work submitted will be my work.

___ **I also understand that the test and quizzes will be timed and only given one time and one time only, and will abide by the rules of test taking, based on academic honesty.**

___ I will also read the syllabus and ask questions on subjects that need further clarification. I understand that this syllabus is a contractual agreement, and accept this syllabus as a contract subject to change, and, if changes are made, my professor will give me prior notice in the form of oral or written communication in class.

___ I will also refer to this syllabus when I have questions about grades and extracurricular projects.

___ I understand that it is my responsibility to drop this course, after consulting my professor.

___ I will consciously make an effort to follow exam, quiz and laboratory schedules. I also understand that lab safety is my responsibility and will record my experiments.

___ I understand that if I cannot meet the established timelines, that I will receive a zero for that exercise.

___ I also understand that any violation of the rules that are written and/or orally communicated for lecture and/or laboratory could result in disciplinary action.

______________________________
Signature and Date