Organic Chemistry I  
Chem. 2423.63200  
Spring 2015  
01/20/2015 THRU TO 03/06/2015

Professor:  
Samar Kolailat  
Email:  
skolailat@dcccd.edu  
Office Phone:  
214-860-8653/214-860-3653  
Office Number:  
Office Hours:  
Meeting Days and Time:  
LEC:  
TR  
9:30-12:20 PM  
LAB:  
TR  
1:00-4:50 PM  
Room Number:  
LEC:  
H 134  
LAB:  
H 134  
Credit Hours:  
4  
Division:  
Science, Nursing, Arts/Humanities and Physical Education  
Dean:  
Stephen Jones, Ph.D.,  
Division Office Phone:  
214-860-8760  
Division Office Number:  
E 40

Course Description:  
This course is for science and science-related majors. It introduces the fundamental classes of organic (carbon) compounds, and begins the study of aliphatic and aromatic compounds, including nomenclature, structure and isomerism, stereochemistry, types of reactions, common mechanisms and syntheses. Lab includes synthesis, purification by distillation, extraction, recrystallization and chromatography, and identification by physical and chemical means and may include spectroscopic identification. (3 Lec., 4 Lab.)

Course Prerequisites:  
Chemistry 1412

Required Text(s):  
LABS are on ecampus.dcccd.edu. Please print out for lab.

Required Materials:  
Goggles, Composition book for notes and latex gloves
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 2014-2015, Chemistry will evaluate and assess the following Core Objectives:

- Critical Thinking
- Communication
- Empirical and Quantitative Skills

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, 2423, 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

Upon successful completion of this course, students will learn in lecture to:

1. Classify organic compounds by structure, molecular orbitals, hybridization, resonance, tautomerism, polarity, chirality, conformation, and functionality.
2. Identify organic molecules using appropriate organic nomenclature.
3. Describe the principle reactions for syntheses of molecules, ions, and radicals.
4. Describe organic reactions in terms of radical and ionic mechanisms.
5. Describe the use of spectroscopic data to determine the structure of organic molecules.
6. Formulate appropriate reaction conditions for the synthesis of simple organic molecules.
7. Demonstrate their ability to represent chemistry artistically, either through presentation, poster or art form.

Upon successful completion of this course, students will in lab to:

1. Perform chemical experiments, analysis procedures, and waste disposal in a safe and responsible manner.
2. Utilize scientific tools such as glassware and analytical instruments to collect and analyze data.
3. Identify and utilize appropriate separation techniques such as distillation, extraction, and chromatography to purify organic compounds.
4. Record experimental work completely and accurately in laboratory notebooks, and communicate experimental results clearly in written reports.
5. Demonstrate a basic understanding of stereochemistry.
6. Classify organic compounds by structure, molecular orbitals, hybridization, resonance, tautomerism, polarity, chirality, conformation, and functionality in laboratory reports.
7. Identify organic molecules using appropriate organic nomenclature in laboratory reports.
9. Describe organic reactions in terms of radical and ionic mechanisms in laboratory reports.
10. Use spectroscopic data to determine the structure of organic molecules.
11. Formulate appropriate reaction conditions for the synthesis of simple organic molecules.
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 2423 COURSE CONTENT

CHAPTER 1 & 2: A REVIEW OF GENERAL CHEMISTRY AND MOLECULAR REPRESENTATION
CHAPTER 3: ACIDS AND BASES
CHAPTER 4: ALKANES AND CYCLOALKANES
CHAPTER 5: STEREOISOMERISM
CHAPTER 6: CHEMICAL REACTIVITY AND MECHANISM
CHAPTER 7: SUBSTITUTION REACTIONS
CHAPTER 8: ALKENES: STRUCTURE AND PREPARATION VIA ELIMINATION REACTIONS
CHAPTER 9: ADDITION REACTIONS OF ALKENES
CHAPTER 10: ALKynes
CHAPTER 11: RADICAL REACTION
CHAPTER 12: SYNTHESIS
CHAPTER 13: ALCOHOLS AND PHENOLS

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

Note: Starting Fall 2006, the final Exams for this course as well as other chemistry courses will be standardized exam from the American Chemical Society.
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>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>50.0</td>
<td>EXAMS**</td>
</tr>
<tr>
<td>24.0</td>
<td>LAB BOOK</td>
</tr>
<tr>
<td>6.0</td>
<td>LAB FINAL</td>
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<tr>
<td>5.0</td>
<td>INCLASS PROJECTS</td>
</tr>
<tr>
<td>5.0</td>
<td>COMPREHENSIVE FINAL EXAM</td>
</tr>
<tr>
<td>10.0</td>
<td>PROJECT*</td>
</tr>
<tr>
<td>1.00</td>
<td>HOMEWORK* (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>Range</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>

INSTITUTIONAL POLICIES
The withdraw date for this class is FEB 24 2015
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.

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

STOP BEFORE YOU DROP
For students who enrolled in college level courses for the first time in the fall of 2007, Texas Education Code 51.907 limits the number of courses a student may drop. You may drop no more than 6 courses during your entire undergraduate career unless the drop qualifies as an exception. Your campus counseling/advising center will give you more information on the allowable exceptions. Remember that once you have accumulated 6 non-exempt drops, you cannot drop any other courses with a “W”. Therefore, please exercise caution when dropping courses in any Texas public institution of higher learning, including all seven of the Dallas County Community Colleges. For more information, you may access: https://www1.dcccd.edu/coursedrops

Financial Aid:
If you are receiving financial aid grants or loans, you must begin attendance in all classes. Do not drop or stop attending any class without consulting the Financial Aid Office. Changes in your enrollment level and failing grades may require that you repay financial aid funds. For further information, please contact Financial Aid at 214-860-8688, 8834, or 8826.

The Texas Success Initiative (TSI):
The Texas Success Initiative (TSI) is a statewide program designed to ensure that students enrolled in Texas public colleges and universities have the basic academic skills needed to be successful in college-level course work. The TSI requires assessment, remediation (if necessary), and advising of students who attend a public college or university in the state of Texas. The program assesses a student’s basic academic skills in reading, writing, and math. Passing the assessment is a prerequisite for enrollment in many college level classes. Students who do not meet assessment standards may complete prerequisite requirements by taking developmental courses in the deficient area and passing them with a grade of C or higher. Additional information is available at https://www1.dcccd.edu/cat0506/admiss/tsi_requirements.cfm

Academic Honesty:
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 Online Catalog. More information is available at https://www1.dcccd.edu/cat0406/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.aspx

**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

**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 **FEB 24 2015**. 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.

For a complete listing of MVC and DCCCD policies, refer to http://www.tasb.org/policy/pol/private/057501/. The highlighted policies below provide partial listing of the duties, rights and responsibilities of students enrolled in MVC courses.
# LECTURE 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>Event Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>T JAN 20</td>
<td>Introduction&lt;br&gt;Pre-Test Standardized Exam&lt;br&gt;American Chemical&lt;br&gt;<strong>LAB:</strong> Safety Orientation</td>
</tr>
<tr>
<td>R JAN 22</td>
<td>Chapter 1 &amp; 2&lt;br&gt;INTRODUCTION AND REVIEW AND MOLECULAR REPRESENTATION&lt;br&gt;<strong>LAB:</strong> Safety Quiz, Lab Check-In; EXCEL Graphing Exercise</td>
</tr>
<tr>
<td>T JAN 27</td>
<td>Chapter 3&lt;br&gt;ACIDS AND BASES&lt;br&gt;<strong>LAB:</strong> MOLECULAR MODELS</td>
</tr>
<tr>
<td>R JAN 29</td>
<td>EXAM I&lt;br&gt;<strong>LAB:</strong> MELTING POINT AND RECRYSTALLIZATION</td>
</tr>
<tr>
<td>T FEB 3</td>
<td>Chapter 4&lt;br&gt;ALKANES AND CYCLOALKANES&lt;br&gt;<strong>LAB:</strong> ISOLATION OF CITRAL FROM LEMONGRASS OIL</td>
</tr>
<tr>
<td>R FEB 5</td>
<td>Chapter 5&lt;br&gt;STEREoisomerism&lt;br&gt;<strong>LAB:</strong> STEREOCHEMISTRY</td>
</tr>
<tr>
<td>T FEB 10</td>
<td>EXAM II&lt;br&gt;<strong>LAB:</strong> EQUILIBRIUM CONSTANT OF A REACTANT</td>
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<tr>
<td>R FEB 12</td>
<td>Chapter 6&lt;br&gt;CHEMICAL REACTIVITY AND MECHANISMS&lt;br&gt;<strong>LAB:</strong> REACTIVITIES OF ALKYL HALIDES</td>
</tr>
<tr>
<td>T FEB 17</td>
<td>Chapter 7 &amp; CH 8&lt;br&gt;SUBSTITUTION REACTIONS&lt;br&gt;<strong>LAB:</strong> CYCLOHEXANOL TO CYCLOHEXENE</td>
</tr>
<tr>
<td>R FEB 19</td>
<td>NO CLASS Employee Development day&lt;br&gt;online exam III</td>
</tr>
<tr>
<td>T FEB 24</td>
<td>Chapter 9&lt;br-LAST DAY TO DROP THE COURSE&lt;br&gt;<strong>LAB:</strong> CYCLOHEXENE TO CYCLOHEXANE-1,2-DIOL</td>
</tr>
<tr>
<td>R FEB 26</td>
<td>Chapter 10, 11 &amp; 12&lt;br&gt;ALKYNES&lt;br&gt;RADICAL &amp; SYNTHESIS&lt;br&gt;<strong>LAB:</strong> SYNTHESIS OF ETHANOL</td>
</tr>
<tr>
<td>T MAR 3</td>
<td>Chapter 13&lt;br&gt;ALCOHOLS &amp; PHENOLS&lt;br&gt;<strong>LAB:</strong> LAB FINAL EXAM/ CHECK OUT/LAB BOOK DUE AND FINAL PROJECT DUE</td>
</tr>
<tr>
<td>R MAR 5</td>
<td>FINAL EXAM</td>
</tr>
</tbody>
</table>
STUDENT CONTACT INFORMATION

Name:_______________________________________  Current E-mail Address:______________________

Current Contact Number:_________________________  Group Name:____________________________

I will 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 turn off my cell phone before every lecture. I also understand that lab safety is my responsibility and will come prepared for lab with proper equipment. I understand that if I am not properly prepared for lab, that I will be asked to leave and receive a zero for that lab. 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