ORGANIC CHEMISTRY II
CHEM.2425.64400
MAYMESTER 2019
05/20/2018 THRU TO 06/05/2018

PROFESSOR: Samar Kolailat
EMAIL: skolailat@dcccd.edu
OFFICE PHONE: 972-860-5663
OFFICE NUMBER: H 127
OFFICE HOURS: BY APPOINTMENT
MEETING DAYS AND TIME: LEC INET
LAB
LAB WILL MEET FOR THE FIRST WEEK ONLY FROM
2:00PM 6:00PM IN H134 TO COMPLETE THE WET LAB PART.

CREDIT HOURS: 4

DIVISION: SCIENCE, NURSING, ARTS/HUMANITIES AND PHYSICAL
EDUCATION
DEAN: CHERLYN RUTH SHULTS
DIVISION OFFICE PHONE: 214 860 3617

COURSE DESCRIPTION
This course is for science and science-related majors. It is a
continuation of Chemistry 2423. Topics include properties and
syntheses of aliphatic and aromatic systems of aldehydes, ketones,
carboxylic acids, esters, ethers, alcohols, amines and amides.
Spectroscopy is included. Further topics may include polyfunctional
and heterocyclic compounds, amino acids, proteins, lipids, and
carbohydrates. Laboratory includes spectroscopy and qualitative
organic analysis, and further work in synthesis. (3 Lec., 4 Lab.)

COURSE PREREQUISITES
Chemistry 2423

REQUIRED TEXT(S)
Map%3A_Organic_Chemistry_(McMurry)
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 in lecture will:

1. Correlate molecular structure with physical and chemical properties of aliphatic and aromatic organic molecules.
2. Predict the mechanism and outcome of aliphatic and aromatic substitution and elimination reactions, given the conditions and starting materials.
3. Predict the chirality of reaction products based on enantiomeric and diastereomeric relationships.
4. Describe reaction mechanisms in terms of energetics, reaction kinetics, and thermodynamics.
5. Use spectroscopic techniques to characterize organic molecules and subgroups.

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

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. Correlate molecular structure with physical and chemical properties of aliphatic and aromatic organic molecules.
6. Predict the mechanism and outcome of aliphatic and aromatic substitution and elimination reactions, given the conditions and starting materials.
7. Predict the chirality of reaction products based on enantiomeric and diastereomeric relationships.
8. Describe reaction mechanisms in terms of energetics, reaction kinetics, and thermodynamics.
9. Use spectroscopic techniques to characterize organic molecules and subgroups.
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.

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>Assignment</th>
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<tbody>
<tr>
<td>40.0</td>
<td>EXAMS</td>
</tr>
<tr>
<td>24.0</td>
<td>LAB REPORTS</td>
</tr>
<tr>
<td>6.0</td>
<td>LAB FINAL/SAFETY QUIZ (1% OUT OF 6)</td>
</tr>
<tr>
<td>15.0</td>
<td>QUIZZES</td>
</tr>
<tr>
<td>10.0</td>
<td>Homework</td>
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<tr>
<td>5.0</td>
<td>COMPREHENSIVE FINAL EXAM</td>
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**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>
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<tr>
<td>B</td>
<td>&lt;89.5 TO 79.5</td>
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<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>
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INSTITUTIONAL POLICIES

COLLEGE SPONSORED EVENT: MOLE DAY

ELECTRONIC DEVICES: CELL PHONES MUST BE SILENCED DURING LECTURE CLASS.

The withdraw date for this class is

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 JULY 31 2018. 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.
### 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>Chapter 12</th>
<th>IR AND MASS SPECTROMETRY</th>
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<tbody>
<tr>
<td>Quiz Ch 12</td>
<td>Homework Ch 12</td>
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<table>
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<tr>
<th>Chapter 13</th>
<th>NMR</th>
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<tr>
<td>Quiz Ch 13</td>
<td>Homework Ch 13</td>
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<table>
<thead>
<tr>
<th>Chapter 18</th>
<th>KETONE AND ALDEHYDE</th>
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<tr>
<td>Quiz Ch 18</td>
<td>Homework Ch 18</td>
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**EXAM I Chapter 12, 13, 18**

<table>
<thead>
<tr>
<th>Chapter 19</th>
<th>AMINE</th>
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<tr>
<td>Quiz Ch 19</td>
<td>Homework Ch 19</td>
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<table>
<thead>
<tr>
<th>Chapter 20</th>
<th>CARBOXYLIC ACIDS</th>
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<tr>
<td>Quiz Ch 20</td>
<td>Homework Ch 20</td>
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<table>
<thead>
<tr>
<th>Chapter 21</th>
<th>CARBOXYLIC ACID DERIVATIVES</th>
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<tbody>
<tr>
<td>Quiz Ch 21</td>
<td>Homework Ch 21</td>
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</table>

**EXAM II Chapter 19, 20, 21**

<table>
<thead>
<tr>
<th>Chapter 22</th>
<th>CONDENSATION AND ALPHA SUBSTITUTION OF A CARBONYL</th>
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<tr>
<td>Quiz Ch 22</td>
<td>Homework Ch 22</td>
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<table>
<thead>
<tr>
<th>Chapter 23</th>
<th>CARBOHYDRATE AND NUCLEIC ACID</th>
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<tr>
<td>Quiz Ch 23</td>
<td>Homework Ch 23</td>
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<table>
<thead>
<tr>
<th>Chapter 24</th>
<th>AMINO ACID, PEPTIDE AND PROTEIN</th>
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<tr>
<td>Quiz Ch 24</td>
<td>Homework Ch 24</td>
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<tr>
<td>Day</td>
<td>Activity</td>
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<td>--------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Monday May 20</td>
<td>Safety Orientation, Safety Quiz and Check-In,</td>
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<td></td>
<td>LAB: CYCLOHEXANOL TO ADIPIC ACID</td>
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<tr>
<td>Tuesday May 21</td>
<td>Benzoin to Hydrobenzoin (put glassware in oven)</td>
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<tr>
<td>Wednesday May 22</td>
<td>Synthesis of Triphenylmethanol PART I</td>
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<tr>
<td></td>
<td>Synthesis of Triphenylmethanol PART II</td>
</tr>
<tr>
<td>Thursday May 23</td>
<td>Synthesis of 2,4-Dinitrobromobenzene CHEMILUMINESCENT</td>
</tr>
<tr>
<td>Friday May 24</td>
<td>LAB FINAL</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