Organic Chemistry II – CHEM3412
Department of Physical & Environmental Sciences
Spring 2020

A. COURSE INFORMATION

Course number/section: CHEM3412.002
Class meeting time: TR 12:30PM-1:45PM
Class location: BH-104
Course Website: https://bb9.tamucc.edu/

B. INSTRUCTOR INFORMATION

Instructor: Jim Silliman, PhD
Office location: Natural Resources Center 3503 (NRC-3503)
Office hours: TR 3:00-5:30PM
Telephone: 361-825-3718
e-mail: james.silliman@tamucc.edu
Appointments: Email or call to schedule an appointment outside office hours

C. COURSE DESCRIPTION

Catalog Course Description
The structure, nomenclature, synthesis, reactions, and reaction mechanisms of the principal classes of organic compounds. Stereochemistry and spectroscopy of organic compounds. Laboratory involves separation and synthetic techniques and development of basic skills. Prerequisite: CHEM 1411. Safety training given during a laboratory meeting early in the semester is required for continued participation in this course.

D. PREREQUISITES AND COREQUISITES

Prerequisites
CHEM3411 (Organic Chemistry I)

Corequisites
SMTE0093

E. REQUIRED TEXTBOOK(S), READINGS AND SUPPLIES

Optional Textbook(s) or Other References
None.

Supplies
Scientific calculator.
F. STUDENT LEARNING OUTCOMES AND ASSESSMENT

Assessment is a process used by instructors to help improve learning. Assessment is essential for effective learning because it provides feedback to both students and instructors. A critical step in this process is making clear the course’s student learning outcomes that describe what students are expected to learn to be successful in the course. The student learning outcomes for this course are listed below. By collecting data and sharing it with students on how well they are accomplishing these learning outcomes students can more efficiently and effectively focus their learning efforts. This information can also help instructors identify challenging areas for students and adjust their teaching approach to facilitate learning.

By the end of this course, students should be able to:
1. use molecular spectroscopy to identify organic compounds
2. identify organic functionality and aspects of stereochemistry
3. apply aspects of chemical bonding & molecular structure
4. predict products from organic reactions
5. understand and apply reaction mechanisms
6. design organic syntheses
7. recognize the importance of thermodynamics and kinetics in organic reactions

G. INSTRUCTIONAL METHODS AND ACTIVITIES

Students will have a chance to learn from each other as they participate in in-class group assignments. Group assignments will complement the latest material covered.

H. MAJOR COURSE REQUIREMENTS AND GRADING

The average of 4 exam grades (including the final), 5 in-class pop quizzes and your lab grade will determine your course grade. Top Hat textbook assignments and Top Hat online homework problems will help you practice the concepts covered in class. You must do the homework problems in order to perform well on quizzes and exams. Three 100-point exams, usually covering 3-4 chapters, are planned. The final exam will be a comprehensive review and will also include a section on previously untested material. If your final exam score is higher than your previous lowest exam score, it will be counted twice to replace your lowest exam score. Final letter grades for the course will be assigned as follows: A: 90%, B: 80%, C: 70%, D: 60%, F: < 60%. At the end of the semester, students’ percentages may be “curved” up depending on where natural breaks occur in the class data.

Course Grade: 25% of the organic chemistry grade is from organic chemistry lab. At the end of the semester, after completing all the lab assignments and exams, you will be assigned a lab grade by your lab instructor. All complaints and concerns about the lab grade should be directed to the lab instructor. You’ll receive more information about lab in the lab syllabus.

<table>
<thead>
<tr>
<th>Component</th>
<th>Formula</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecture Grade</td>
<td>Lecture % X 0.75</td>
<td>75</td>
</tr>
<tr>
<td>Lab Grade</td>
<td>Lab % X 0.25</td>
<td>25</td>
</tr>
<tr>
<td>Course Grade</td>
<td></td>
<td>100</td>
</tr>
<tr>
<td>ACTIVITY</td>
<td>Points</td>
<td></td>
</tr>
<tr>
<td>--------------</td>
<td>--------</td>
<td></td>
</tr>
<tr>
<td>3 Exams</td>
<td>300</td>
<td></td>
</tr>
<tr>
<td>Final Exam</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Quizzes</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>500</td>
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</tr>
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I. COURSE CONTENT/SCHEDULE

Tentative Schedule:

<table>
<thead>
<tr>
<th>DATE</th>
<th>TOPIC</th>
<th>CHAPTER</th>
<th>EXAM</th>
</tr>
</thead>
<tbody>
<tr>
<td>T 1/21 &amp; R 1/23</td>
<td>Review: Subst. &amp; Elim.</td>
<td>7-11</td>
<td></td>
</tr>
<tr>
<td>T 1/28 &amp; R 1/30</td>
<td>IR &amp; MS</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>T 2/04 &amp; R 2/06</td>
<td>IR &amp; MS/NMR</td>
<td>16/17</td>
<td>Exam 1</td>
</tr>
<tr>
<td>T 2/11 &amp; R 2/13</td>
<td>NMR</td>
<td>17</td>
<td></td>
</tr>
<tr>
<td>T 2/18 &amp; R 2/20</td>
<td>NMR/Conjugated Systems</td>
<td>17/19</td>
<td></td>
</tr>
<tr>
<td>T 2/25 &amp; R 2/27</td>
<td>Conjugated Systems</td>
<td>19</td>
<td></td>
</tr>
<tr>
<td>T 3/03 &amp; R 3/05</td>
<td>Aromatic Compounds</td>
<td>20</td>
<td>Exam 2</td>
</tr>
<tr>
<td>T 3/10 &amp; R 3/12</td>
<td>Spring Break</td>
<td></td>
<td></td>
</tr>
<tr>
<td>T 3/17 &amp; R 3/19</td>
<td>Aromatics/Rxns of Aromatics</td>
<td>20/21</td>
<td></td>
</tr>
<tr>
<td>T 3/24 &amp; R 3/26</td>
<td>Rxns of Aromatics</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>T 3/31 &amp; R 4/02</td>
<td>Rxns of Aromatics</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>T 4/07 &amp; R 4/09</td>
<td>Aldehydes &amp; Ketones</td>
<td>22</td>
<td>Exam 3</td>
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<tr>
<td>T 4/14 &amp; R 4/16</td>
<td>Ald. &amp; Ket./Carboxylic Acids</td>
<td>22/24</td>
<td></td>
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<tr>
<td>T 4/21 &amp; R 4/23</td>
<td>Carboxylic Acids</td>
<td>24</td>
<td></td>
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<tr>
<td>T 4/28 &amp; R 4/30</td>
<td>Carboxylic Acid Derivatives</td>
<td>25</td>
<td></td>
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<tr>
<td>T 5/05</td>
<td>Condensations &amp; Substitutions</td>
<td>26</td>
<td></td>
</tr>
<tr>
<td>R 5/14</td>
<td>Final Exam</td>
<td>16-26</td>
<td>Final Ex.</td>
</tr>
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Exam Schedule:
- Exam 1: Thursday, 2/13/20
- Exam 2: Thursday, 3/05/20
- Exam 3: Thursday, 4/09/20
- Final Exam: Thursday, 5/14/20 (11:00AM – 1:30PM)

Note: Changes in this course schedule may be necessary and will be announced to the class by the Instructor. The assignments and exams shown are directly related to the Student Learning Outcomes described in Section F.
J. **COURSE POLICIES**

**Attendance/Tardiness**
The student is expected to arrive on time prepared to take notes and work on in-class problems with pen or pencil, paper, calculator and colored markers/pencils. If absent, it is the responsibility of the student to obtain missed information from a classmate. Missed information includes not only lecture notes, but also any possible information regarding syllabus changes.

**Make-up Exams**
*There will be no make-up exams or quizzes for this class.* If you miss one lecture exam, your final exam grade will be counted twice to replace the missed exam. This applies to ONE exam only. If you miss more than one, you will receive a zero for the additional missed exam(s). For those students who do not miss an exam, your final exam grade will be counted twice to replace your lowest exam grade (assuming that this improves your overall grade). Do not show up late to an exam, **no student will be admitted to the exam after the first exam-taker has left.**

**Extra Credit**
All extra credit is included on each exam and there will be at least one extra credit quiz offered during the semester.

**Cell Phone Use**
*Before* you enter the lecture hall turn **OFF** your cell phone! Beepers must also be turned off or put on silent mode. **Electronic interruptions will NOT be tolerated! Cell phones must be put away and stored out of sight during all quizzes and exams or you will receive a zero!!**

**Laptop Use**
You are welcome to use a laptop to take notes during class. Do not use it to check email, facebook, youtube videos, etc. These other uses are considered a distraction and you will be asked to leave.

**Food in Class**
Drinks and snacks are allowed. Do not bring in a meal – this is not a cafeteria.

**Participation**
You are expected to be attentive and participate in asking/answering questions and also in group assignments.

**Others**
None.
K. COLLEGE AND UNIVERSITY POLICIES

- Academic Integrity (University)
  University students are expected to conduct themselves in accordance with the highest standards of academic honesty. Academic misconduct for which a student is subject to penalty includes all forms of cheating, such as illicit possession of examinations or examination materials, falsification, forgery, complicity or plagiarism. (Plagiarism is the presentation of the work of another as one’s own work.) In this class, academic misconduct or complicity in an act of academic misconduct on an assignment or test will result in a failing grade.

- Classroom/Professional Behavior
  Texas A&M University-Corpus Christi, as an academic community, requires that each individual respect the needs of others to study and learn in a peaceful atmosphere. Under Article III of the Student Code of Conduct, classroom behavior that interferes with either (a) the instructor’s ability to conduct the class or (b) the ability of other students to profit from the instructional program may be considered a breach of the peace and is subject to disciplinary sanction outlined in article VII of the Student Code of Conduct. Students engaging in unacceptable behavior may be instructed to leave the classroom. This prohibition applies to all instructional forums, including classrooms, electronic classrooms, labs, discussion groups, field trips, etc.

- Statement of Civility
  Texas A&M University-Corpus Christi has a diverse student population that represents the population of the state. Our goal is to provide you with a high quality educational experience that is free from repression. You are responsible for following the rules of the University, city, state and federal government. We expect that you will behave in a manner that is dignified, respectful and courteous to all people, regardless of sex, ethnic/racial origin, religious background, sexual orientation or disability. Behaviors that infringe on the rights of another individual will not be tolerated.

- Deadline for Dropping a Course with a Grade of W (University)
  I hope that you never find it necessary to drop this or any other class. However, events can sometimes occur that make dropping a course necessary or wise. Please consult with your academic advisor, the Financial Aid Office, and me, before you decide to drop this course. Should dropping the course be the best course of action, you must initiate the process to drop the course by going to the Student Services Center and filling out a course drop form. Just stopping attendance and participation WILL NOT automatically result in your being dropped from the class. Please consult the Academic Calendar (http://www.tamucc.edu/academics/calendar/) for the last day to drop a course.

- Grade Appeals (College of Science and Engineering)
  As stated in University Procedure 13.02.99.C2.01, Student Grade Appeal Procedures, a student who believes that he or she has not been held to appropriate academic standards
as outlined in the class syllabus, equitable evaluation procedures, or appropriate grading, may appeal the final grade given in the course. The burden of proof is upon the student to demonstrate the appropriateness of the appeal. A student with a complaint about a grade is encouraged to first discuss the matter with the instructor. For complete details, including the responsibilities of the parties involved in the process and the number of days allowed for completing the steps in the process, see University Procedure 13.02.99.C2.01, Student Grade Appeal Procedures. These documents are accessible through the University Rules website at http://www.tamucc.edu/provost/university_rules/index.html, and the College of Science and Engineering Grade Appeals webpage at http://sci.tamucc.edu/students/GradeAppeal.html. For assistance and/or guidance in the grade appeal process, students may contact the chair or director of the appropriate department or school, the Office of the College of Science and Engineering Dean, or the Office of the Provost.

- **Disability Services**
  The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please call (361) 825-5816 or visit Disability Services in Corpus Christi Hall 116.

If you are a returning veteran and are experiencing cognitive and/or physical access issues in the classroom or on campus, please contact the Disability Services office for assistance at (361) 825-5816.

http://disabilityservices.tamucc.edu/

- **Statement of Academic Continuity**
  In the event of an unforeseen adverse event, such as a major hurricane and classes could not be held on the campus of Texas A&M University–Corpus Christi; this course would continue through the use of Blackboard and/or email. In addition, the syllabus and class activities may be modified to allow continuation of the course. Ideally, University facilities (i.e., emails, web sites, and Blackboard) will be operational within two days of the closing of the physical campus. However, students need to make certain that the course instructor has a primary and a secondary means of contacting each student.

L. **OTHER INFORMATION**

- **Tutoring and Test Taking Strategies**
  To be successful in this course, and most others, you must develop good note-taking skills, organization skills, study habits, and test-taking strategies from the very beginning. Your
instructor, seminar leaders and TA’s are always available for help, but don’t wait until it’s too late! It is important that you are aware that the Center for Academic Student Achievement in Room 216 of the library provides free tutoring, test-taking strategies, and extra help. **Take advantage of this service!** Should you have test anxiety, stress problems, or need help with study skills, the University Counseling Center (Driftwood 107: 825-2703) also provides a free service.

- **Use of Electronic Devices During Exams**
  Any use of an electronic device (palm pilot, Cell Phone, MP3 player, CD player, computer …) during an exam is strictly prohibited. Any use of such a device will be considered an attempt to cheat on the exam and will result in a 0 on the exam although more severe actions may be considered. Calculators may be allowed on exams when needed, but only for mathematical operations. The use of programmable calculators to store or retrieve information during an exam will be considered an attempt to cheat on the exam. Also, if a calculator is discovered to have saved programs or information that could be used as an unfair advantage on the exam, this will be considered an attempt to cheat on the exam. Programs or operators that aid in mathematical operations such as a quadratic equation calculator may be used.

- ** Assigned Homework**
  Top Hat Assignments and Homework for this class are to help you learn the material …**DO NOT GET BEHIND.** Complete assignments prior to class time and do the homework problems before each exam.

- **Academic Advising**
  The College of Science & Engineering requires that students meet with an Academic Advisor as soon as they are ready to declare a major. The Academic Advisor will set up a degree plan, which must be signed by the student, a faculty mentor, and the department chair. Meetings are by appointment only; advisors do not take walk-ins. Please call or stop by the Advising Center to check availability and schedule an appointment. The College’s Academic Advising Center is located in Center for Instruction 350 or can be reached at (361) 825-3928.

**GENERAL DISCLAIMER**

I reserve the right to modify the information, schedule, assignments, deadlines, and course policies in this syllabus if and when necessary. I will announce such changes in a timely manner during regularly scheduled lecture periods.