SYLLABUS

Organic Chemistry II - 54648 - CHEM 2325 - 05  Instructor: Debasish Bandyopadhyay
Spring 2018  E-mail: debasish.bandyopadhyay@utrgv.edu
TR 8:00 am – 9:15 am (ESCNE 2.104)  Office location & hours: ESCNE 3.326A & MTW: 7:30-9:00 pm OR by mutual appointment through email (debasish.bandyopadhyay@utrgv.edu) at ESCNE 3.492 (3rd floor, research wing).

Other Text Books/Reference Books/Web links will also be followed. PPTs will be provided through Blackboard, as required.

Course Summary and Prerequisites: The prerequisite is CHEM 2323 or can be taken concurrently with CHEM 2323.

Unit  Title
1. General Review
2. Aromaticity
3. Electrophilic Aromatic Substitution Reactions
4. Nucleophilic Aromatic Substitution Reactions
5. Alkenes: Structure, Reactivity, and Synthesis
6. Alkynes: Structure, Reactivity, and Synthesis
7. Alcohols and Phenols
8. Ethers and Epoxides
9. Amines
10. Carboxylic Acids & their Derivatives
11. Chemistry of polymers, fats, carbohydrates, amino acids and proteins

Course Description


Unit 4. Nucleophilic Aromatic Substitution (SnAr) reactions: Nucleophiles— Differences between Sn1, Sn2, and SnAr— Mechanisms: Addition-Elimination (Meisenheimer complex) & Elimination-Addition (Benzyne)— Orbital diagram— Chichibabin reaction.


Unit 11. Chemistry of polymers, fats, carbohydrates, amino acids and proteins: Classification of Biological compounds— General structures & Functions.

Learning Objectives/Outcomes for the Course
- To understand the core basic concepts in Organic Chemistry
- To have deeper understanding of the mechanistic details in Organic Chemistry
- To learn various functional groups and their reactivity
- To understand the acid-base chemistry
- To learn various aspects of spectroscopy
- To correlate Organic Chemistry in day-to-day life
- To learn the art and logic in organic syntheses
- To demonstrate the use of Organic Chemistry in Medicine

Learning Objectives for Core Curriculum Requirements
- Graduates will have both broad knowledge and skills of critical thinking in the chemical sciences.
- Graduates will be prepared to conduct (either as individual or as a team) or participate in research.
- Graduates will demonstrate the ability to communicate chemical knowledge.
- Graduates will be prepared to enroll themselves for the upper level Organic Chemistry study (e.g. Advanced Organic Chemistry/Medicinal Chemistry lecture courses) to develop empirical and quantitative skills.
- Graduates are prepared to search for employment (including graduate or professional school) to meet social and personal responsibilities.

Grading Policies: The distribution of points are as follows:

Total Points = 600
Three Unit Tests: 3x100 = 300 Points
Comprehensive Final Examination: 200 Points
Homework/In-Class work/Attendance: 100 points
Three Unit Tests and the Comprehensive Final Examination will be based on the lectures, study materials, Board works, and homework. The type of tests will be determined after consultation with the students in the class room. THREE take-home exercises will be given through Blackboard before three Unit Tests. The results of Homework/In-Class work/Attendance (25x3+15+10 = 100 points) will be added to the score of the FOUR (3 Unit Tests + Comprehensive Final Exam) exams. The final examination will be comprehensive and will also examine the students’ critical thinking skills to propose solutions to problems involving multiple aspects of the course. After the final exam, letter grade will be assigned as follow:

- A ≥ 90% (540 points or more)
- B ≥ 80% (480 points or more)
- C ≥ 70% (420 points or more)
- D ≥ 60% (360 points or more)
- F < 60% (Less than 360 points)

Homework: Homework problems will be assigned periodically, three times during the semester, seven days before each unit test. Students MUST submit their homework through Blackboard. Direct email to the instructor (debasish.bandyopadhyay@utrgv.edu) will NOT be considered.

**Unit Tests’ Schedule**
- Unit Test 1: March 01, 2018 (Thursday)
- Unit Test 2: March 29, 2018 (Thursday)
- Unit Test 3: May 01, 2018 (Tuesday)

These dates are tentative only. Actual test dates may vary and these will be discussed extensively with the students in the classroom. In addition to these tests, there will be discussions on the subject and extra credit will be offered to the students who would give answers of the questions in the classroom, participate in cooperative and group learning method.

**Final Examination: May 08th, 2018 (Tuesday, 8:00-9:45 am)**

**Other Course Information**
Individual student’s performance/question/more advanced knowledge of the subject can be discussed at the office (ESCNE 3.326A) during my office hours (MTW: 7:30-9:00 pm) and through mutual appointment by E-mail (debasish.bandyopadhyay@utrgv.edu) at ESCNE 3.492 (3rd floor, research wing). To make an appointment, please check my schedule in Blackboard. You can make an appointment during my Research hours by suggesting three timings/availabilities/slots. I’ll pick one of your three proposed slots and respond to you through email. It is expected that a college student won’t be absent after finalizing an appointment. All the four examinations are equally important. There will be no make-up exams, except for those officially excused prior to the exam. It is your responsibility to attend ALL the examinations. Otherwise, your grade will be affected seriously. In case of serious illness or a legitimate emergency, a student may be excused from one Unit Test. However, I should be informed prior to the examination, and a signed written explanation of the circumstances leading to the student’s absence must be presented. A note from a physician or an accident report should accompany this explanation. You may get zero if I do not receive appropriate correspondences.

**Calendar of Activities**
The UTRGV academic calendar can be found at [https://my.utrgv.edu/home](https://my.utrgv.edu/home) at the bottom of the screen, *prior to login*. Some important dates for spring 2018 include:

- January 16: First day of classes
- January 19: Last day to add a course or register for spring 2018
- March 12 – 17: SPRING BREAK – NO classes
March 30 – 31  EASTER HOLIDAY – NO classes
April 12  Last day to drop a course; will count toward the 6-drop rule
May 2  Last day of classes
May 3  Study Day – NO class
May 4 – 10  Spring 2018 Final Exams
May 11 - 12  Commencement Ceremonies

UTRGV Policy Statements

The UTRGV disability accommodation, mandatory course evaluation statement and sexual harassment statement are required on all syllabi. Additional policy statements are optional, such as those covering attendance, academic integrity, and course drop policies.

STUDENTS WITH DISABILITIES:

Students with a documented disability (physical, psychological, learning, or other disability which affects academic performance) who would like to receive academic accommodations should contact Student Accessibility Services (SAS) as soon as possible to schedule an appointment to initiate services. Accommodations can be arranged through SAS at any time, but are not retroactive. Students who suffer a broken bone, severe injury or undergo surgery during the semester are eligible for temporary services. **Brownsville Campus**: Student Accessibility Services is located in Cortez Hall Room 129 and can be contacted by phone at (956) 882-7374 (Voice) or via email at ability@utrgv.edu. **Edinburg Campus**: Student Accessibility Services is located in 108 University Center and can be contacted by phone at (956) 665-7005 (Voice), (956) 665-3840 (Fax), or via email at ability@utrgv.edu.

MANDATORY COURSE EVALUATION PERIOD:

Students are required to complete an ONLINE evaluation of this course, accessed through your UTRGV account (http://my.utrgv.edu); you will be contacted through email with further instructions. Online evaluations will be available **April 11 – May 02** for the regular spring semester. Students who complete their evaluations will have priority access to their grades.

ATTENDANCE:

Students are expected to attend all scheduled classes and may be dropped from the course for excessive absences. UTRGV’s attendance policy excuses students from attending class if they are participating in officially sponsored university activities, such as athletics; for observance of religious holy days; or for military service. Students should contact the instructor in advance of the excused absence and arrange to make up missed work or examinations.

**STUDENT WILL NOT BE ALLOWED TO ATTEND THE CLASS IF S/HE ARRIVES MORE THAN 15 MINUTES LATE.**

SCHOLASTIC INTEGRITY:

As members of a community dedicated to Honesty, Integrity and Respect, students are reminded that those who engage in scholastic dishonesty are subject to disciplinary penalties, including the possibility of failure in the course and expulsion from the University. Scholastic dishonesty includes but is not limited to: cheating, plagiarism (including self-plagiarism), and collusion; submission for credit of any work or materials that are attributable in whole or in part to another person; taking an examination for another person; any act designed to give unfair advantage to a student; or the attempt to commit such acts. Since scholastic dishonesty harms the individual, all students and the integrity of the University, policies on scholastic dishonesty will be strictly enforced (Board of Regents Rules and Regulations and UTRGV Academic Integrity Guidelines). All scholastic dishonesty incidents will be reported to the Dean of Students.

SEXUAL HARASSMENT, DISCRIMINATION, and VIOLENCE:

In accordance with UT System regulations, your instructor is a “Responsible Employee” for reporting purposes under Title IX regulations and so must report any instance, occurring during a student’s time in college, of sexual
assault, stalking, dating violence, domestic violence, or sexual harassment about which she/he becomes aware during this course through writing, discussion, or personal disclosure. More information can be found at [www.utrgv.edu/equity](http://www.utrgv.edu/equity), including confidential resources available on campus. The faculty and staff of UTRGV actively strive to provide a learning, working, and living environment that promotes personal integrity, civility, and mutual respect that is free from sexual misconduct and discrimination.

**COURSE DROPS:**

According to UTRGV policy, students may drop any class without penalty earning a grade of DR until the official drop date. Following that date, students must be assigned a letter grade and can no longer drop the class. Students considering dropping the class should be aware of the "3-peat rule" and the "6-drop" rule so they can recognize how dropped classes may affect their academic success. The 6-drop rule refers to Texas law that dictates that undergraduate students may not drop more than six courses during their undergraduate career. Courses dropped at other Texas public higher education institutions will count toward the six-course drop limit. The 3-peat rule refers to additional fees charged to students who take the same class for the third time.

**STUDENT SERVICES:**

Students who demonstrate financial need have a variety of options when it comes to paying for college costs, such as scholarships, grants, loans and work-study. Students should visit the Students Services Center (U Central) for additional information. U Central is located in BMAIN 1.100 (Brownsville) or ESSBL 1.145 (Edinburg) or can be reached by email (ucentral@utrgv.edu) or telephone: (888) 882-4026. In addition to financial aid, U Central can assist students with registration and admissions.

Students seeking academic help in their studies can use university resources in addition to an instructor's office hours. University Resources include the Learning Center, Writing Center, Advising Center and Career Center. The centers provide services such as tutoring, writing help, critical thinking, study skills, degree planning, and student employment. Locations are:

- **Learning center:** BSTUN 2.10 (Brownsville) or ELCTR 100 (Edinburg)
- **Writing center:** BLIBR 3.206 (Brownsville) or ESTAC 3.119 (Edinburg)
- **Advising center:** BMAIN 1.400 (Brownsville) or ESWKH 101 (Edinburg)
- **Career center:** BCRTZ 129 (Brownsville) or ESSBL 2.101 (Edinburg)