Available at UTRGV Bookstore
Handouts/PPTs will be provided, as required. For broader knowledge, students may read “The Organic Chemistry Lab Survival Manual: A Student’s Guide to Techniques”, 9th Edition by James W. Zubrick.

Prerequisites & Description: Credit/registration in CHEM 2323. An introduction to organic synthesis. Fundamental techniques such as crystallization, distillation, extraction and chromatography are discussed and applied to the preparation of organic compounds.

<table>
<thead>
<tr>
<th>Expt. No.</th>
<th>Date</th>
<th>Experiment</th>
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</thead>
<tbody>
<tr>
<td>01</td>
<td>01/24/2018</td>
<td>Check-in, Turn in Safety Contract and Course Discussion</td>
</tr>
<tr>
<td>1</td>
<td>01/31</td>
<td>Separating Cyclohexane and Toluene by Distillation (Macroscale)</td>
</tr>
<tr>
<td>2</td>
<td>02/07</td>
<td>Isolating Clove Oil from Cloves using Steam Distillation (Semi-Microscale)</td>
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<tr>
<td>3</td>
<td>02/14</td>
<td>Isolating Caffeine from Tea (Skip sublimation)</td>
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<td>4</td>
<td>02/21</td>
<td>Synthesis of Acetanilide &amp; its purification through Recrystallization</td>
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<td>5</td>
<td>02/28</td>
<td>Melting Point determination of Compounds (Caffeine and Acetanilide) and Mid-Term Exam Review</td>
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<td>—</td>
<td>03/07</td>
<td>Midterm Examination</td>
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<tr>
<td>6</td>
<td>03/21</td>
<td>Separating a Mixture of Biphenyl, Benzhydrol, and Benzophenone by Thin Layer Chromatography</td>
</tr>
<tr>
<td>7</td>
<td>03/28</td>
<td>Separating Ferrocene &amp; Acetylferrocene by Adsorption Column Chromatography</td>
</tr>
<tr>
<td>8</td>
<td>04/04</td>
<td>Studying S_N1 &amp; S_N2 Reactions: Nucleophilic Substitution</td>
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<tr>
<td>9</td>
<td>04/11</td>
<td>Dehydrating Cyclohexanol (Semi-Microscale)</td>
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<tr>
<td>—</td>
<td>04/18</td>
<td>Final Examination Review and Check-out</td>
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<td>—</td>
<td>04/25</td>
<td>Final Examination</td>
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Learning Objectives/Outcomes for the Course

- To understand the core basic concepts in Organic Chemistry
- To learn the art and logic in organic syntheses
- To learn safety and handling of chemicals in the laboratory.
- To gain hands on experience in laboratory techniques.
- 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 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:

<table>
<thead>
<tr>
<th>Experiment, Quizzes, and Lab Reports</th>
<th>100 Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mid-Term Examination</td>
<td>100 Points</td>
</tr>
<tr>
<td>Final Examination</td>
<td>100 Points</td>
</tr>
</tbody>
</table>

Reviews for Mid-Term and Final Examination will be provided 7 days before the test. The points earned from the NINE Experiments, Quizzes, and Lab Reports (100 points in TOTAL) will be added to the score of the TWO (Mid Term + Final) exams. Both the examinations will 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% (270 points or more) ☺ B ≥ 80% (240 points or more) ☺ C ≥ 70% (210 points or more) ☺ D ≥ 60% (180 points or more) ☺ F < 60% (Less than 180 points) ☞

Other Course Information

The type of tests will be determined after consultation with the students in the laboratory. Individual student's performance/question/more advanced knowledge of the subject can be discussed at the office (SCNE 3.326A) during my office hours (MTW: 7:30-9:00 pm) and through mutual appointment by E-mail (debasish.bandyopadhyay@utrgv.edu). To make an appointment, please check my schedule in Blackboard. You can make an appointment during my research hours by suggesting three preferred timings/availabilities/slots. I'll pick up 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. Both the 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 take BOTH 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 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.

Safety First: No PPE (Personal Protective Equipment) - No Lab

Mandatory Safety Quiz: Students must view “Video on Safety” and take “Safety Quiz” (required) and pass it with an 80 or higher or they will be dropped from lab. There will be a deadline.

Essential Lab Requirements:

- Safety Glasses/Goggles – can be worn over prescription glasses. No contact lenses.
- Lab Coat – Non-flammable garments. NO synthetic fibers or loosely woven natural fibers.
- Closed-Foot Shoes - Footwear should NOT readily absorb chemicals during a chemical spill.
- Long Pants – No part of the legs should be exposed. (No Leggings)
- NO food, drink (water bottle), or gum allowed. NO text message. NO horseplay or unauthorized experiments. Students in violation of safety regulations will NOT be allowed in lab!

If you allow your Lab partner to work without PPE, you will both get removed from Lab and not receive credit for the experiment.

Before you leave the lab make sure that your work station, sinks, and balances are clean. This may affect your grade.
Calendar of Activities

The UTRGV academic calendar can be found at 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)