THE UNIVERSITY OF TEXAS RIO GRANDE VALLEY
DEPARTMENT OF CHEMISTRY

CHEM 2123 / Organic Chemistry I Laboratory / Course Syllabus / Fall 2018
*Course syllabus may be subject to change

Instructor: Ms. Vanessa L. Garcia, M.S.       E-mail address: vanessa.garcia@utrgv.edu
Office: SETB 1.504        Office Phone: 956-882-5735
Office Hours: T 9:00am-11:00am; Th 12:00pm-1:00pm; F 9:00am-11:00am; or by appointment (send email)

Course Description: An introduction to organic synthesis. Fundamental techniques such as crystallization, distillation, extraction and chromatography are discussed and applied to the preparation of organic compounds.

Prerequisites: Refer to ASSIST for all prerequisites.

REQUIRED SUPPLIES
1. Laboratory coat (long sleeve)
2. Safety eye-glasses
3. Scientific calculator

FALL 2018 ACADEMIC CALENDAR
August 27       First day of classes
August 30       Last day to add a course or register for fall 2018
September 3     Labor Day – NO classes
November 14     Last day to drop a course; will count toward the 6-drop rule
November 22 - 24 Thanksgiving Holiday – NO classes
December 6      Study Day – NO classes
December 7 - 13 Final Exams
December 14 – 15 Commencement Exercises

Learning Outcomes for CHEM 2123
Upon successful completion of this course, students 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.

Learning Objectives for Core Curriculum Requirements
This course meets 1 hour of the core requirement for Integrative and Experiential Learning Courses (up to 3 hours from science labs) in this category involve interdisciplinary topics or approaches and/or learning
through direct experience. Science Labs (maximum 3 hours; offered in conjunction with science courses listed in the Life and Physical Sciences component area).

**BLACKBOARD & EMAIL**
All of the experiments will be posted ahead of time under Course Materials and will be available for students to access. Make sure to periodically check your Blackboard and UTRGV e-mail accounts for announcements and posting from the instructor. Email communication with the instructor will only occur via your UTRGV email address.

**LAB ATTENDANCE**
Attendance to the lab is strictly enforced. Students are required to do all the laboratory experiments at the scheduled time. After 10 minutes of the beginning of the laboratory, students will not be allowed in the lab, resulting in a “0” for that particular lab. No make-up labs are given unless you can show a verifiable, and a legitimate reason for missing. If a verifiable, and legitimate reason is presented and accepted, you must fill out the **MAKE-UP LAB FORM** and return to Ms. Garcia the next class.

**LAB SAFETY**
Students are required to wear the proper laboratory personal protective equipment (PPE - long pants that cover the entire legs, closed shoes, laboratory coat, safety eye-glasses, and restriction of long hair) for each lab at all times. Students will not be allowed to perform the experiment without the proper PPE resulting in a “0” for that particular lab. Do not begin laboratory exercises unless Ms. Garcia is present. Follow the Experimental Procedures – do not perform unauthorized experiments! Absolutely no horseplay, food, drinks, or chewing gum allowed.

- No jeggings, workout pants, or synthetic bottoms allowed!
- Your entire legs must be covered. Therefore, if any part of your skin on your legs is exposed, you will be dismissed from the laboratory.
- Do not “weigh” chemicals directly on balance surfaces; use weighing paper or beakers.
- Dispose of broken glassware, solid, liquid, and organic wastes in appropriately labeled containers – **NOT down the sink or in wastes basket!**
- Add reactive chemicals only to clean & dry beakers, flasks, graduated cylinders, etc.
- Use flames (Bunsen burners) only when authorized; most organic solvents are highly flammable!
- Do not leave experiments unattended.
- Put chemicals and equipment back to where you found them.
- Do not pour chemicals back into reagent containers.
- Condenser water should flow through equipment at a moderate rate only.
- Clean up your and your partner’s work area before leaving.
- Use common sense – ask if you do not know!
- Before you perform an experiment, I will spend ≈10 min. going over the theory, techniques, and safety aspects associated with each experiment.
- You will work with a partner throughout the semester.

**LAB REPORTS**
Students will submit their own individual lab report. Here is the basic outline you should incorporate for typing your lab report:

- Double spaced
- 12 pt font
- Times New Roman font
- Black ink only
- **NO LATE REPORTS WILL BE ACCEPTED!** (see Calendar below)
- **Helpful Tip:** Produce a report so understandable, easy to follow, and as detailed as possible that if you were to lose your lab manual/results your report was the only way you/someone else can reproduce the same results.
EXAMS
There will be 2 major exams given during the semester. SEE THE CALENDER BELOW for the exam dates. ABSOLUTELY NO CELL PHONES OR OTHER ELECTRONICS will be permitted during the exams! If caught with a device that is prohibited, the exam will be taken away and a zero “0” will be given as the official grade for the exam.

MAKE-UP EXAM POLICY
Make up exams, including exams need to be taken early, will only be given due to a major medical illness requiring immediate treatment, there is a death of an immediate family member, you must participate in a required university activity, you are observing a religious holy day, or you are currently serving in the military. Documentation is required for all of these cases. In the cases of your illness or a family member's death, documentation is required when you return to campus. In the case of a required university activity, a religious holy day, or military service, documentation is required at least one week prior to the activity. In case a make-up exam is given, it will be at the discretion of the instructor and at a time convenient to her schedule. Please note, however, that a makeup exam might be different than the regularly scheduled exam.

QUESTIONS ON GRADED REPORTS/EXAMS
Grades will only be discussed during office hours (NOT DURING CLASS TIME OR VIA EMAIL). If a student believes that a question on a report/exam has been miss graded, the student should bring it up to the instructor's attention during office hours (NOT DURING CLASS TIME OR VIA EMAIL) without delay. The student MUST support his/her claim by working out the problem in advance and present a written solution to it. If the question entails theory, then the student must provide the textbook page or place in the class notes were his or her claim is supported. Please make sure to take care of any problems before the next exam or assignment. I will NOT discuss any grading concerns after this period.

GRADING POLICY
Here is a list of these sources with their point values and grades:

<table>
<thead>
<tr>
<th>Pt. Source</th>
<th>No.</th>
<th>Pts.</th>
<th>Totals</th>
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<tbody>
<tr>
<td>Experiments</td>
<td>9</td>
<td>70</td>
<td>630</td>
</tr>
<tr>
<td>Exams</td>
<td>2</td>
<td>100</td>
<td>200</td>
</tr>
<tr>
<td>Evaluation</td>
<td>1</td>
<td>70</td>
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<td><strong>Sum</strong></td>
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<td>Grade</td>
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<td>D</td>
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<td>F</td>
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†Points assigned at end of semester; criteria include punctuality, safe practices and lab stewardship.
‡You are guaranteed at least these grades if your scores fall within these ranges.

### CALENDAR

<table>
<thead>
<tr>
<th>Week</th>
<th>Exp. No</th>
<th>Experiment</th>
<th>Due</th>
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<tbody>
<tr>
<td>Aug. 27-31</td>
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<td>Orientation, Syllabus, Safety</td>
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<tr>
<td>Sept. 10-14</td>
<td>1 ‡</td>
<td>Check-in/Structures and Nomenclature of Alkanes and Cycloalkanes</td>
<td>Safety Agreement</td>
</tr>
<tr>
<td>Sept. 17-21</td>
<td>2 ‡</td>
<td>Melting Points</td>
<td>Exp. #1 Worksheets</td>
</tr>
<tr>
<td>Sept. 24-28</td>
<td>3</td>
<td>Recrystallization of Solids</td>
<td>Exp. #2 Worksheets</td>
</tr>
<tr>
<td>Oct. 1-5</td>
<td>4</td>
<td>Liquid-Liquid Solvent Extraction</td>
<td>Exp. #3 Report</td>
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<tr>
<td>Oct. 8-12</td>
<td>5</td>
<td>Thin-Layer Chromatography</td>
<td>Exp. #4 Report</td>
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<td>Oct. 15-19</td>
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<td><strong>Exam 1 (Exp. 1-5)</strong></td>
<td>Exp. #5 Report</td>
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<td>Oct. 22-26</td>
<td>6</td>
<td>Reactions of Hydrocarbons</td>
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<td>Oct.29 – Nov. 2</td>
<td>7</td>
<td>Reactivity of Alkyl Halides in Nucleophilic Substitution Reactions</td>
<td>Exp. #6 Report</td>
</tr>
<tr>
<td>Nov. 5-9</td>
<td>8</td>
<td>Kinetics of SN1 Solvolysis with tert-Butyl Chloride</td>
<td>Exp. #7 Report</td>
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<td>Nov. 12-16</td>
<td>9</td>
<td>Synthesis and Distillation of Cyclohexene from Cyclohexanol</td>
<td>Exp. #8 Report</td>
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<td>Nov. 26-30</td>
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<td><strong>Exam 2 (Exp. 6-9)</strong></td>
<td>Exp. #9 Report</td>
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☺There is no lab reports for these experiments; there will be worksheets to complete instead.

### STUDENTS’ CODE OF CONDUCT

Students are expected to carry themselves and behave as adults and to show respect for fellow students, the instructor, and the university setting. A high degree of decorum is expected from the students while in this class. No classroom misconduct such as talking in class, using cell phones or any other way that disturbs the lecture delivery will be tolerated. Student(s) behaving in such matter will be asked to leave the classroom. If the problem persists, the student(s) will be permanently barred from class.

### 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.

Pregnancy, Pregnancy-related, and Parenting Accommodations: Title IX of the Education Amendments of 1972 prohibits sex discrimination, which includes discrimination based on pregnancy, marital status, or parental status. Students seeking accommodations related to pregnancy, pregnancy-related condition, or parenting (reasonably immediate postpartum period) are encouraged to contact Student Accessibility Services for additional information and to request accommodations.
Student Accessibility 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. Students who complete their evaluations will have priority access to their grades. Online evaluations will be available on or about:

Module 1 October 4 – 10
Module 2 November 29 – December 5
Full Fall Semester November 15 – December 5

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.

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, 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)
THE UNIVERSITY OF TEXAS RIO GRANDE VALLEY
DEPARTMENT OF CHEMISTRY

CHEM 2123 MAKE-UP LAB FORM
__________________________________________ Fall 2018
*MUST MAKE-UP DURING WEEK EXPERIMENT IS BEING CONDUCTED ONLY

1. Notify Ms. Garcia or your TA (via e-mail) of your absence 24-hours before the missed class. Ms. Garcia or your TA will determine whether your absence is excusable.
2. If excusable, contact the other lab instructor for permission to attend his/her class.
3. Fill out this form with the other lab instructor's signature.
4. Turn in this form and the complete lab report to Ms. Garcia or your TA the next class to get credit for the missed lab.

Student Name: __________________________
ID: ____________________________
Date Absent: M T W Th F __ __ - __ __ - 2018

Attended Lab: 2123. __ __
Attended Lab Date: M T W Th F __ __ - __ __ - 2018

Check Missed Experiment:

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|   | 1 | Structures and Nomenclature of Alkanes and Cycloalkanes
|   | 2 | Melting Points
|   | 3 | Recrystallization of Solids
|   | 4 | Liquid-Liquid Solvent Extraction
|   | 5 | Thin-Layer Chromatography
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|   | 7 | Reactivity of Alkyl Halides in Nucleophilic Substitution Reactions
|   | 8 | Kinetics of SN1 Solvolysis with tert-Butyl Chloride
|   | 9 | Synthesis and Distillation of Cyclohexene from Cyclohexanol

Instructor Signature: __________________________
Date: __________________