Course Syllabus
Chemistry 2401 K - Organic Chemistry I
Instructor: Dr. Subhash C. Goel
Fall 2014

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Course Description; Chemistry 2401K is the first semester of a two semester sequence in organic chemistry. This sequence discusses the chemical reactions of organic (carbon containing) compounds. This course focuses on principles important in organic reactions such as bonding, isomerism, stereochemistry, reaction mechanisms, and spectroscopy.

Class Hours: 3 Laboratory Hours: 2 Credit Hours: 4

Course Objective: This course provides the basic principles needed to understand the many reactions and mechanisms presented in Chemistry 2402 and more advanced chemistry or biology courses.

Learning Outcomes: After completing this course students wii be able to:

- draw the structure of and name of alkanes.
- draw the structure of and name alkenes.
- draw the structure of and name alkynes.
- Explain the mechanism of bromination of alkenes.

Required Prerequisite Course: Chemistry 1211K

Recommended Prerequisite Courses; Chemistry 1212K, Math 0099, English 0099, Reading 0099, or high school equivalent

Office: Stubbs Office # 127; phone: (912)260-4339

Office Hours: MTWR: 8:00 am – 9:30 am, 11:00 am – 12:00 pm, and MT: 12:00 pm – 1:00 pm in STEM Center

Textbooks

- Organic Chemistry; 9th Edition By: Francis A Carey;

- Laboratory Manual for Organic Chemistry; A Short Course; 13th edition; By: Hart , Craine, Hart, and Vinod

ASSESSMENT AND EVALUATION

- Quizzes will be given at the end of each chapter. Each quiz will carry 50 points and 45 minute duration. One lowest scoring quiz will be dropped in calculating final grade. A cumulative midterm (covering the material until midterm) and a cumulative final (covering the material between midterm and final) will be given. Each exam will carry 150 points. There is no provision to makeup a missed quiz or exam.
- The final course grade will be determined using the average of the quizzes and exams (75%), the laboratory grade (25%). As in all chemistry classes, you must pass the laboratory portion to pass the class.

- The course letter grade will be based on the following:

  A 90.0 -- 100.0%

  B 80.0 -- 89.9%

  C 70.0 -- 79.9%

  D 60.0 -- 69.9%

  F 0.0 -- 59.9%

- Laboratory reports are due on next laboratory day. The grade of a late lab report will be reduced 10% for each day it is late. One lowest grade on lab reports will be dropped when calculating lab grade for final grade.

Attendance Policy: In order to get the most from any course, each student should attend all scheduled classes. The attendance policy for the Division of Natural Science and Mathematics contains the following requirements.

- The maximum number of class days a student can miss and still receive credit for the course is twice the number of lecture classes in a week. This is 4 classes per semester.
- A sign-in sheet will be passed around during each class period, and students are required to sign this sheet in order to receive attendance credit. Students who sign the name of other students on the attendance sheet will receive a zero for all assignments given that week and will also receive absences for that entire week (2 absences).
- There are no make-ups for laboratories.

Withdrawal Policy

- Withdrawing before Add/Drop has been completed will leave no record of taking the course on your transcript.
- Withdrawal before midterm will give you a grade of "W." This will appear on your transcript.
- Withdrawal after midterm will give you a grade of "WF."
- Hardship Withdrawal: A hardship withdrawal may only be sought after midterm in the case of a non-academic hardship such as a severe, extended illness. The procedure for seeking a hardship W is located on page 56 of the college catalog.

Special Needs Statement: If you have a disability and require reasonable classroom accommodations, please see me after class or make an appointment during office hours. If you plan to request accommodations for a disability, please register with the Office of Disability Services in Room 118, Powell Hall, phone number 912-260-4435. Also, if you find that any content in this course is inaccessible because of your disability, please contact me as soon as possible.

Non-Student Policy: It is a campus policy that visitors and children may not be present in classes or laboratories at South Georgia College while they are in session.

Honor System: This course will be conducted utilizing the concepts embodied in an Honor System. Your awareness and acceptance of the Honor System will be indicated by your signature in addition to your printed name on all work submitted to me for evaluation. Work submitted to me without a signature will not be evaluated. It will be recorded as a zero and returned so that you may sign and resubmit it for evaluation. Appropriate action will be taken against those found to be in violation of the Honor System.

Counseling Services are confidential and available upon request. If you would like to schedule a session, referral forms are located online or outside the counselor's office. Please complete and submit the referral form to the counselor. Do not submit by email. Once you have submitted your form you will be contacted by phone to set up an appointment. The Counselor's Office is located in Powell Hall, Room 119, phone number 912.260.4438.

STEM Center

The STEM (Science, Technology, Engineering, and Mathematics) Center is located in Stubbs 125 and is open Monday-Thursday from 1PM to 5PM. The STEM Center is a resource center that fosters independent learning to help students achieve their academic goals. Resources include, but are not limited to: Laptops, desktop computers, printing for STEM majors, SAT/ACT practice tests, CLEP practice tests, NCLEX practices tests, PCAT practice tests, study packets, free calculator rental, study groups, textbooks, and much more! Any question is welcome in the STEM Center/Lecture Topics

- Chapter 1: Structure Determines Properties
- Chapter 2: Alkanes and Cycloalkanes
- Chapter 3: Conformations of Alkanes and Cycloalkanes
- Chapter 4: Alcohols and Alkyl Halides
- Chapter 5: Structure and Preparation of Alkenes; Elimination Reactions
- Chapter 6: Reactions of Alkenes; Addition Reactions
- Chapter 7: Stereochemistry
- Chapter 8: Nucleophilic Substitution
- Chapter 9: Alkynes

Laboratory Exercises

- Check-In
- Melting Point Determination (1)
- Recrystallization of acetanilide (macroscale) (2)
- Recrystallization of p-dibromobenzene (microscale) (2)
- Distillation (macroscale) (3)
- Extraction (macroscale)(4)
- Extraction of Caffeine from Tea Leaves/Eugenol from cloves (5)
- Thin-Layer Chromatography (6B) (May visit Optima Chemicals to learn GC and HPLC)
- Cyclohexene from Cyclohexanol (8a)
- Conversion of Maleic Acid to fumaric acid (9a)
- Check-out

Note: Lab experiment may be changed depending on availability of the resources.

Disclaimer
Circumstances may require some changes to this syllabus during the conduct of the course.