1. COURSE TITLE, NUMBER, AND SECTION:
*Organic Chemistry I, CHEM 2423-301*

2. INSTRUCTOR INFORMATION
INSTRUCTOR: Dr. Chammi S. Miller
Email: eCampus mail or chammi.gamage@blinn.edu
Tel: 979 -209-8609
Office Hours: M-F 12.00 pm – 1.00 pm
Office: H252

3. COURSE DESCRIPTION:
A comprehensive survey of the chemistry of aliphatic and aromatic compounds including reaction mechanisms, spectroscopy and chromatography. The laboratory will involve the use of fundamental techniques of synthesis, isolation and analysis of various types of organic compounds. Three class hours and three laboratory hours per week. Credit: Four semester hours.

4. PREREQUISITE:
CHEM 1412 with a grade of “C” or better.

5. CORE CURRICULUM COURSE:
This is a course in the 42-hour Core Curriculum of Blinn College. As such, students will develop proficiency in appropriate intellectual competencies, exemplary educational objectives and general perspectives. The URL of the Blinn College core curriculum web site is:
http://www.blinn.edu/corecurriculum/42hourcore.htm

6. STUDENT LEARNING OUTCOMES:
After completing this course, you will be able to:
- Describe those topics from general chemistry important to the study of organic chemistry (structure of atoms and molecules, Lewis Dot structures, acid-base chemistry).
- Apply the rules of nomenclature to organic compounds.
- Classify how alkenes react.
- Classify the different kinds of isomers possible for organic compounds, and organize reactions in relationship to the type(s) of stereoisomers produced.
- Describe how various techniques can be used to utilize terminal alkynes to synthesize organic compounds.
- Discuss delocalized electrons and resonance and explain how these effect acidity, molecular stability, and the outcome of organic reactions.
- Analyze the reactions of dienes by comparing 1,2- and 1,4-additions.
- Compare how alkanes behave under extreme conditions.
- Discuss the substitution and elimination reactions of alkyl halides by comparing stereospecific and regiospecific outcomes and the factors that determine whether a given alkyl halide undergoes substitution, elimination, or both.
- Summarize the reactions of alcohols and contrast these reactions to those of phenols.
- Compare methods for the synthesis of specific alcohols.
- Compare the reactions and synthesis of ethers, epoxides, thiols, and sulfides.
- Contrast reactions of alcohols with those of ethers and epoxides.
7. REQUIRED TEXTBOOKS AND MATERIALS:
Lab Manual: Available from the campus Copy Center - required.
Lab Eye Protection: You will need *chemical safety goggles* for use in the laboratory.
Laboratory Notebook: *The Official Laboratory Research Notebook*, Jones and Bartlett, publishing, any consecutively numbered (sets) carbonless copy notebook will work. It does need tear-out sheets. These are available in bookstore around the area.
Molecular Modeling Set: Available in bookstore or you can get it online.
Homework: TBA – Check eCampus for homework information.

Supplementary material: *Organic Chemistry as a Second Language*: First semester topics (Any edition!).

8. OUTLINE OF THE COURSE CONTENT AND SCHEDULE:
*This is an eCampus supplemented course*
See attached schedule

9. CIVILITY STATEMENT:
Members of the Blinn College community, which includes faculty, staff and students, are expected to act honestly and responsibly in all aspects of campus life. Blinn College holds all members accountable for their actions and words. Therefore, all members should commit themselves to behave in a manner that recognizes personal respect and demonstrates concern for the personal dignity, rights, and freedoms of every member of the College community, including respect for College property and the physical and intellectual property of others. Civility applies to attire as well as language, behavior, and cell phone usage. Please dress appropriately for the academic classroom and laboratory.

10. CIVILITY NOTIFICATION STATEMENT:
If a student is asked to leave the classroom or have access to the online classroom denied because of uncivil behavior, the student may not return to that class until he or she arranges a conference with the instructor. It is the student’s responsibility to arrange for this conference.

11. COURSE REQUIREMENTS
Exams are a requirement. There will be 3 in class exams and 1 take home exam, worth 100 points each given about as indicated in the attached schedule. Each of the exams will include all of the material covered through that stage of the course, i.e., all exams are comprehensive. The lowest of the four exam grades will be replaced by the final exam grade if you do better on finals exam than the lowest of the four exam grades. Format of the exams will vary. **No makeup exams** will be allowed in summer sessions. If you miss an exam that will be your lowest grade and will be replaced by final grade.

Laboratory Experiments are a requirement. The laboratory portion of this course counts for 25% of the total course grade. We have 10 labs scheduled. You will be graded on your lab report. Lab reports will be due at the beginning of the next class period after the lab is completed. The lowest 2 lab grades will be dropped. You will lose 5 points per class period for labs turned in late. End of the semester you will have lab finals and worth 100 points. There are **no make-up labs!!**
You will need to wear enclosed footwear (closed toed shoes). Appropriate lab attire (you need to be covered from neck to knees, must have sleeves in your shirt or blouse). You will be dismissed from the lab if you fail to follow safety procedure, wear protective eye wear at all times. Missing a lab will result in a zero for the experiment being performed that day.
**Quizzes are a requirement.** There will be a number of quizzes given during the semester. **There will be no make-up offered for quizzes.** The lowest of the quiz grades will be dropped.

**Course Packet:** Available at college copy center. Course packet includes chapter selection for each topic listed in the syllabus, practice exams and answer keys, Dry labs, lab outlines, group assignments, Quiz outlines, and grading rubrics.

**Eye protection is a requirement:** Students are responsible for purchasing appropriate eye protection and wearing eye protection during laboratories. Appropriate eye protection for this class will be safety goggles.

### 12. EXAM AND MAJOR ASSIGNMENT CALENDAR:
See attached schedule

### 13. CRITERIA FOR GRADING AND DETERMINING FINAL GRADE:
Grading will be based on a point system as follows:

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Points</th>
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</thead>
<tbody>
<tr>
<td>Four Major Exams</td>
<td>100 each (400 total)</td>
</tr>
<tr>
<td>Quizzes</td>
<td>100</td>
</tr>
<tr>
<td>Laboratory Work</td>
<td>150</td>
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<tr>
<td>Lab Exam</td>
<td>100</td>
</tr>
<tr>
<td>Homework</td>
<td>50</td>
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<tr>
<td>Comprehensive Final</td>
<td>200</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>1000 points</strong></td>
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*Extra points* 50 points – *Gain it though online homework*

The grading system of Blinn College recognizes the following grade values:

- **A** = 90-100% mastery of material
- **B** = 80-89%
- **C** = 70-79%
- **D** = 60-69%
- **F** = less than 59%

Your grades will be posted on eCampus, check eCampus for all the grades. eCampus grade book is not an official grade book. However, the total grade shown on eCampus grade book is very close to your actual grade.

### 14. BLINN COLLEGE POLICIES:

- **a. Attendance:** The College District believes that class attendance is essential for student success; therefore, students are required to promptly and regularly attend all their classes. Each class meeting builds the foundation for subsequent class meetings. Without full participation and regular class attendance, students shall find themselves at a severe disadvantage for achieving success in college. Class participation shall constitute at least ten percent of the final course grade. It is the responsibility of each faculty member, in consultation with the division chair, to determine how participation is achieved
in his or her class. Faculty will require students to regularly attend class and will keep a record of attendance from the first day of class and/or the first day the student’s name appears on the roster through final examinations. If a student gain three days of absences during the semester, he/she will be administratively withdrawn from the class.

There are four forms of excused absence officially recognized by Blinn College: (1) observance of religious holy days: The student should notify his/her instructor(s) not later than the 1st week of the semester concerning the specific date(s) that the student will be absent for any religious holy day(s); (2) representing Blinn College at an official institutional function; (3) official involvement in a high school activity for “dual credit” students; and (4) military service. Other excuses will be considered and may be considered excusable at the instructor’s discretion, with documentation. **Missing lecture or lab or both will count as one absence.**

**b. Dropping:** If a student chooses to drop the course, **it is that student’s responsibility to complete a drop order at the Office of Enrollment Services.** Failure to do so could result in a grade of F in the course. The last day **to withdraw with a “Q” is Friday, June 22, 2012.**

**c. Honor System:** Blinn College does not tolerate cheating, plagiarism, or other acts of dishonesty. Definitions of these acts and procedures for dealing with them are described in “Scholastic Dishonesty” in the Blinn College Student Handbook, copies of which are available at the information desk in the administration building. All tests will be closed book and notes. All students will remove hats and sunglasses before tests. In my classes, we are on a student honor system which we will talk about the first day. Plagiarized work will be automatically given a zero and may be reported for disciplinary action.

**d. Electronic Device Policy:** All the functions of all personal electronic devices designed for communication and/or entertainment (cell phones, pagers, beepers, iPods, and similar devices) must be turned off and kept out of sight in all Blinn College classrooms and associated laboratories. Any noncompliance with this policy will be addressed in accordance with the Blinn College civility policy (Administrative Policy).

**e. Problem Resolution:** If you have a complaint about your class, you should first request a conference with your instructor to try and resolve the problems or issues. If the problems or issues cannot be resolved at the instructor level, you should request a conference with assistant division chair Dr. Lee Don Bienski, Science 231, lbienski@blinn.edu or the Division Chair, Mr. Dwight Bohlmeyer, Science 241, dbohlmeyer@blinn.edu

**f. Health Concerns:** Eating and drinking are not allowed in classrooms or laboratories.

**g. ADA Statement:** Reasonable accommodations for students with documented learning or physical disabilities will be made upon presentation of a formal request by the student. An official request form is supplied and completed by the Office of Disability Services (ODS) located in the College Park Center Administration Building (Room A-135). The URL to the Office of Disability Services webpage is [http://www.blinn.edu/disability.htm](http://www.blinn.edu/disability.htm). Accommodation is not retroactive from the time of concluding agreement for accommodation.

If you need individual accommodations to meet course objectives because of a documented disability, please make an appointment with me to discuss your needs as soon as possible so that we can ensure your full participation in class and fair assessment of your work.
h. Blinn Handbook: The above requirements and policies are discussed more fully in the Blinn College Student Handbook which, by reference, is incorporated into this information. Blinn College Student Handbook is available online at [http://www.blinn.edu/student%20handbook.pdf](http://www.blinn.edu/student%20handbook.pdf). Please obtain and read.

15. OTHER

**Home Work:** Homework assignments and due dated will be posted on eCampus. There will be no extensions for online homework under any circumstances.

**Dry Labs:** We will do few dry labs during the semester. Dry labs are due the same day you complete the lab. Therefore, I strongly encourage you to start your dry labs ahead of time.

**Group Work is Compulsory:** We will have group work sessions. During that time Dr. Miller will walk around the class, if you need help you should raise your hand. She will not walk to you and help you unless you ask for help.

**Final Exam:** If you wish to take final exam early (one day early), you should inform your instructor during the first week of the semester.

**This Class starts M-F 7.30 am.** If you are late 15 minutes or more to the class it will be considered as an unexcused absence. You will be excused only for the very first late presence to the class, after that it will be count against you. All the quizzes will be done in the class and will be started 7.30 am. If you miss a quiz because you are late to the class, you cannot make up the quiz.

**eCampus:** Send me e-mails through e-campus. You are expected to visit eCampus to access the notes, lecture power points, homework assignment and due dates, lab due dates, and any supplementary handouts.

**Cellphone Usage:** No cell phones allowed in the lecture period or the lab period. If you have an emergency, please excuse the instructor, go outside and use your cell phone. **Cell phone usage in class room or in the lab will cost you -2 points every time.**
# Tentative Schedule

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<thead>
<tr>
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<tbody>
<tr>
<td>June 4th</td>
<td>Introduction, Review from general chemistry</td>
<td>Review, Functional groups, Laboratory safety</td>
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<tr>
<td>June 5th</td>
<td>Lewis structures, formal charges, hybridization</td>
<td>Resonance structures, acid base theory</td>
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<tr>
<td>June 6th</td>
<td>Intermolecular forces, solvation effects, group study session</td>
<td>Alkanes, lab orientation</td>
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<tr>
<td>June 7th</td>
<td>alkanes, Naming organic compounds</td>
<td>Who has my compounds lab</td>
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<td>June 8th</td>
<td>Conformations, Using Models, worksheet Quiz</td>
<td>Recrystallization lab</td>
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<td>Chapter 1-4 (In Klein)</td>
<td>Take home exam will be online</td>
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<tr>
<td>June 11th</td>
<td>Cycloalkanes, cyclohexane conformations</td>
<td>Take home exam is due</td>
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<tr>
<td>June 12th</td>
<td>Radical halogenation reactions and mechanisms</td>
<td>Extraction methods lab</td>
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<tr>
<td>June 13th</td>
<td>Stereochemistry and isomers</td>
<td>Exam Review</td>
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<tr>
<td>June 14th</td>
<td><strong>Exam 1</strong></td>
<td>Thin Layer chromatography lab with chlorophyll</td>
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<tr>
<td>June 15th</td>
<td>Overview of organic reactions, reaction kinetics and thermodynamics</td>
<td>Carbocation stability, introduction to alkenes, Nomenclature</td>
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<td>Chapter 4-6, 11 (In Klein)</td>
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<tr>
<td>June 18th</td>
<td>Substitution reactions: $S_N1$, $S_N2$ mechanisms, group study sessions</td>
<td>More alkene reactions, Elimination reactions: E1, E2 Mechanism</td>
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<tr>
<td>June 19th</td>
<td>Introduction to synthesis, Alkynes, naming alkynes, reactions</td>
<td><strong>Synthesis Lab 1</strong></td>
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<tr>
<td>June 20th</td>
<td>Alkyl halides, organo-coupling reactions</td>
<td>Exam Review</td>
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<tr>
<td>June 21st</td>
<td><strong>Exam 2</strong></td>
<td><strong>Natural Product Isolation lab</strong></td>
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<tr>
<td>June 22nd</td>
<td>Alcohols and phenols, Reaction mechanisms overview</td>
<td>IR spectroscopy Lab</td>
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<td>7-10, 12 (In Klein)</td>
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<tr>
<td>June 25th</td>
<td>alcohols and phenols reactions</td>
<td>Simple distillation and GC lab</td>
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<tr>
<td>June 26th</td>
<td>Ethers and epoxides, group study sessions</td>
<td><strong>Synthesis lab 2</strong></td>
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<tr>
<td>June 27th</td>
<td>Thiols and Sulfides, group study sessions</td>
<td>Oxidation of Secondary alcohol lab</td>
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<td>June 28th</td>
<td><strong>Exam 3</strong></td>
<td>Group study sessions</td>
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<tr>
<td>June 29th</td>
<td>Final Review</td>
<td>Final Review for lab exam</td>
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<td>Chapter 13-14 (In Klein)</td>
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<tr>
<td>July 2nd</td>
<td><strong>Final Exam</strong></td>
<td>Lab Finals</td>
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