Syllabus for CHEM 241 – Organic Chemistry I, 3CR, Great Basin College

Section number: 1001

Instructor: Dr. David Freistroffer
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Office hours (Fall 2014): Mon. 2:00-4:00PM, Tues. and Thurs. 4:00-5:30PM

Course catalog description: Intensive introduction to the theory of carbon chemistry with particular emphasis on understanding the relationship between the structure and behavior of organic molecules. Prerequisite: Must have completed CHEM 122 and be taking CHEM 241L.

Additional course description: A Note on Transferring this Course: This organic chemistry series is designed to transfer to just about any institution in the USA. I have separated out the lab portion of this course to add flexibility in transferring it. Please come talk to me if you plan on transferring this class.


Learning outcomes and measurements (see far below for general ed outcomes)

<table>
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<tr>
<th>Outcomes (with examples)</th>
<th>Measurements</th>
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<tr>
<td>1. Students will be able to apply principles of bonding in organic molecules, including VSEPR theory, valence bond theory, hybrid orbitals, and molecular orbital theory to solving problems</td>
<td>Exams</td>
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<tr>
<td>2. Students will be able to apply principles of organic acids and bases, including pKa, the Brønstead-Lowry definition, and the Lewis definition to solving problems. They should also be able to predict relative acid and base strengths for organic molecules and the basis for relative pKa.</td>
<td>Exams</td>
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<td>3. Naming, identification, and drawing of stereoisomers (cis, trans, R, S, E, Z, etc.)</td>
<td>Exams</td>
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<td>4. Naming, identification, and drawing of conformations of alkanes, cycloalkanes, monosubstituted cyclohexanes, disubstituted cyclohexanes, polycyclic molecules, including ring strain.</td>
<td>Exams</td>
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<td>5. Solve problems using nomenclature, reactivity,</td>
<td>Exams</td>
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<td>and reactions of alkanes, cycloalkanes, alkenes, alkynes, and aromatic compounds</td>
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Note: Homework and term paper measurements will also assess the students’ understanding of the material in the outcomes above. These measurements will only be used for student grading purposes and not for course assessment. My reasoning for doing this is that homework and the term paper are formative assessment.

Method of instruction
Lecture, assignments, exams. Live in Elko and lecture-capture.

Course requirements and grading system
Lecture exams (3 exams, 1 comprehensive final) 80%
Homework 15%
Term paper on a famous organic chemist 5%

Grading scale:
A=100-90
B=89-80
C=79-70
D=69-60
F for anything below 60

The W policy at GBC has changed. Instructors will not be able to give a 'W' after 60% of the course is completed. This means that you will be completely responsible for issuing yourself a 'W' in any of my courses by withdrawing from the course by the 'W' deadline. You are responsible for knowing this policy, knowing when the deadline is, and actually completing the course withdrawal yourself. Instead of issuing a 'W', GBC instructors will generally issue an 'F' that contains a footnote that the 'F' is for non-attendance (if you stopped attending). This has the dual effect of being an 'F' and also signaling financial aide, etc. that you did not attend. This is an adaptation to Nevada State policy.

Further explanation of the course requirements

Exams: There are 3 exams during the semester worth 100 points each. There is a comprehensive final worth 200 points at the end. The comprehensive final is approximately 50% new material and 50% previous/comprehensive material. The exams are given on the dates listed in the schedule in Elko only. Out of town students may arrange to take the test in conjunction with lab on Friday in Elko. Exam grades will be curved or adjusted to a normal distribution centered on 75% or higher. Since this is difficult to do in a small class I will be very transparent and generous when I do this.

Homework: Doing practice problems is essential for success in organic chemistry. Because I expect that you will spend a lot of time on doing problem sets I will be grading them to reward
your hard work. The due dates and times for the homework will vary on where we are in the --- they will be clearly listed in WebCampus. You must hand it in by scanning it and submitting it in the space provided in WebCampus. It will be graded according to the following rubric: less than half of questions attempted - 0 pts., incomplete but more than half of questions attempted – 5 pts., complete – 7 pts., complete + 1 random question correct – 8 pts., complete + 2 random questions correct – 10 pts. Your lowest homework score for the semester will be dropped (this will be done a few weeks before the end). Late homework will not be accepted.

**Term paper:** A one page (12 pts., single-spaced, MS Word format) term paper is required. You can write it on an organic chemist of your choice. The instructions are located in the assignment section of WebCampus. The due date for this assignment is located in the schedule and/or on WebCampus.

**Attendance policy:** Attendance is not required in lecture, except for when we are taking an exam. Attendance is required in the weekly live labs (see CHEM 241L syllabus) – otherwise you will have trouble getting your data...

**Policy on missed/late exams, homework assignments, labs, etc.:** Late work is not accepted – it gets you a 0 on the assignment, etc. These course elements can only be made up with an approved (by me – ie. completely at my discretion) written excuse. The student must make every effort to contact me before the assignment, etc. is actually due. My preferred method of communication is email – but I do understand that emergencies sometimes warrant a phone call.

**Extra credit policy:** No extra credit is given in this course.

**ADA statement: Accommodations for Students with Disabilities**
Great Basin College is committed to providing equal educational opportunities to qualified students with disabilities in accordance with state and federal laws and regulations, including the Americans with Disabilities Act of 1990 and Section 504 of the Rehabilitation Act of 1973. A qualified student must furnish current verification of disability. The Students with Disabilities Office, located in Berg Hall, will assist qualified students with disabilities in securing the appropriate and reasonable accommodations, auxiliary aids, and services. For more information or further assistance, please call 775.753.2271.

**Student conduct:** GBC's student conduct policy will be enforced in this course. This includes, but is not limited to reporting all plagiarism, other forms of cheating, and any behavior that the instructor deems disruptive.