Chemistry 22 Syllabus - Dr. Kline - Spring 2014

Lecture: MW 6:30-9 pm, Sci 140

Dr. Kline Contact Information
- Office: Sci 272
- E-mail: kline_peggy@gapps.smc.edu; kline_peggy@smc.edu (the second one forwards to the first one, so either is OK)
- Phone: 310-434-4745
- Web Site: homepage.smc.edu/kline_peggy/

Office Hours
MW 4:30-6 pm, and Th 3:30-4:30 pm; also online via eCompanion (access via Corsair Connect; will usually get response within 24-36 hours)

Course Materials and Resources

Books and Supplies
- Organic Chemistry, 2nd ed., by David Klein. The package sold in the SMC Bookstore includes a loose-leaf text, solutions manual, and a registration code for WileyPLUS. You can buy the same package directly from Wiley for a bit less money by following the link on the Chem 21 or Chem 22 web page. Advice on using other texts: The 1st edition seems similar with respect to the organization of topics and many of the problems (but not necessarily the problem numbers) so you can probably make that work with some effort on your part. Using the Bruice text is going to require a lot of effort on your part as the organization is significantly different and the problems are obviously different. The instructor will not provide book section numbers for tests and quizzes for anything but the 2nd edition of Klein. The instructor does have problem set suggestions from the last few editions of Bruice.
- Study Guide and Solutions Manual to accompany Klein text – optional, but highly recommended. In addition to solutions for all of the problems, including in-chapter ones it includes the following: the review information at the back of each chapter in a workbook format, mistakes to avoid, and lists of useful reagents.
- Molecular Model kit – optional, but highly recommended. If you buy one on your own, either the ball and stick or "jacks" type (Darling models) are OK and each has its strengths and weaknesses. Both are also sold in the SMC bookstore. The ball and still version sold in the bookstore has more carbon atoms (15 vs 6) than the one linked here.

Available via Internet
- Class Bulletin Board - in eCompanion - threaded discussion for Q&A
- WileyPLUS (https://www.wileyplus.com/WileyCDA/) - optional - Course is set up and students can register for it and access the eText and other amenities. Depending on the level of interest, assignments may be provided.

Grading

<table>
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<tr>
<th>Assessment</th>
<th>Points</th>
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<tbody>
<tr>
<td>Tests (3)</td>
<td>300</td>
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<tr>
<td>Quizzes (9/10)</td>
<td>90</td>
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<tr>
<td>Final Exam</td>
<td>120</td>
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<td><strong>Total =</strong></td>
<td><strong>510</strong></td>
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<table>
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<th>Standards (based on total points):</th>
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<tr>
<td>A ≥ 459 points  (90%)</td>
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<tr>
<td>B ≥ 408 points  (80%)</td>
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<tr>
<td>C ≥ 331 points  (65%)</td>
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<tr>
<td>D ≥ 255 points  (50%)</td>
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<td>F &lt; 255 points</td>
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No tests will be dropped; however, your percent score on the ACS Test that covers the full year of organic chemistry can be used to replace your lowest test score. There is no risk associated with taking the ACS Test as it will be dropped if it is the lowest score.
Class Information

- **Course material** will be posted on or linked from the class web site: http://homepage.smc.edu/kline_peggy/chem-22/. The instructor will send out communications to students using their official SMC email addresses and/or eCompanion so make sure you check the email addresses associated with both of those. You are responsible for knowing about information sent to your official SMC address and via eCompanion.

- **Contacting the instructor.** Use the Threaded Discussion (Q&A) area of eCompanion to ask course-related (content and protocols) questions. Use email only for personal questions. Include the course name as the subject in any email to help keep it from getting trapped in the spam filter. The instructor reserves the right to ignore questions asked via email that should have been asked via the threaded discussion.

- Successful completion of this course will require full participation in all class activities. Punctuality is critical as well—plan to arrive on time each and every class period. You will miss important material, annoy your fellow students and anger the instructor when you disrupt the class by entering late. Students are responsible for knowing what happens in class, including schedule changes, material not in the book, information about what’s going to be on the next test and so on. It is a good idea to have the names and contact information for a few students whom you can contact if you miss class.

- **Electronic devices.** Please adjust cell phones, laptops, and tablets, etc. so they do not make noise and/or and disrupt class members; the instructor reserves the right to confiscate such devices that do make noise and/or to evict students who are not using them appropriately during class time.

- **No eating, gum chewing, or drinking** is permitted in classrooms or labs; no food or drink is permitted unless it’s sealed so that it absolutely cannot spill.

- **Tutoring.** The Science Learning Resource Center (Sci 245, http://www.smc.edu/sciencelrc/) provides free tutoring for SMC students and other resources; see Saundra Willis (434-4630) to set up a tutoring appointment.

- **Religious Holiday Absences.** SMC Academic Regulation 5530 states: “It is the college practice that students may be required to make-up missed work from absences due to the observance of a religious holiday, but they cannot be penalized for such absences. This practice applies to any work affecting a student’s grade.” My policy is to avoid scheduling tests and quizzes on religious holidays that commonly affect students in my classes and, whenever possible, to schedule labs that can easily be rescheduled or done on a student’s own time on religious holidays that affect large numbers of students. Students must let the instructor know by email within the first week of class of any planned absence due to a religious holiday. I try to offer students opportunities to make up labs they have to miss and expect students to make a reasonable effort to make up said labs. I do lecture on religious holidays and students who need to miss class are expected to get notes from other students.

- **SMC accommodates students with disabilities.** If you qualify for any special accommodations due to a disability, you need to officially process your request through the Disabled Students Programs and Services (DSPS) office. If you believe you have a learning disability that has not yet been documented, please see me and make an appointment at the DSPS office for assistance. The DSPS office is located in the Admissions/Student Services Complex, Room 101, and the phone numbers are (310) 434-4265 and (310) 434-4273 (TDD). Students requiring permissible accommodations should contact the instructor by email no later than the end of the second week or classes or as soon as s/he becomes aware of the disability. No retroactive accommodations will be provided. The student is solely responsible for securing any provisions to which they may be entitled. Scheduling of accommodated exams must be made through DSPS.

- **Topics for test and quiz questions** will be taken from information presented in lecture and assigned problems. Quizzes will be given at the end of the class period in a regular semester and at the beginning during a short session.

- **There will be no makeup tests or quizzes.** If you miss a test for a legitimate, verifiable reason the higher of the normalized score on the final or the percent score on the ACS test will be used in place of that test score. Note that the ACS test can be used only once; thus, you cannot use it to replace a missed test and the lowest remaining test score. If you miss a quiz, it will be the one that is dropped.

- “Graphing” calculators are permitted during tests for which calculators are permitted until the first occurrence of one being used improperly; from that point on, they will not be permitted for any student in any class. No cell phones, dictionaries, or translators are allowed during quizzes or tests.

- **The Academic Honesty Policy of Santa Monica College** will be strictly enforced. Acts of academic dishonesty including, but not limited to, plagiarism, providing test/quiz answers to another student, and copying from another student can result in a failing grade for the assignment or the course. Plagiarism consists of presenting the words of another person as your own and includes “recycling” written work from other students and the Internet. Both the provider and the recipient of the information will be penalized. In addition, lying, manipulative or disruptive behavior
will not be tolerated. More information on SMC policies is available on the website for The Office of Student Judicial Affairs. Students need to be familiar with the SMC Code of Academic Conduct.

- **Re-grading.** Tests may be submitted for re-grading (or re-adding) within one week of their initial return to students. Please note that the instructor reserves the right to re-grade the entire test or quiz. Answers that look as if they could have been changed after they were graded will not be considered for re-grading.

- **Dates and Deadlines.** See the SMC Dates and Deadlines web page for enrollment and payment deadlines and Corsair Connect for individual course withdrawal deadlines. The instructor reserves the right to drop any student who misses any class meetings during the first week. The instructor will probably drop students who miss a test without notification or appear to vanish; however, clerical errors do occur. If you want to be sure you are dropped, do it yourself. Aside from the circumstances under which you may be dropped by the instructor, it is nevertheless your responsibility as a student to withdraw from class if you do not intend to complete it. Students must not expect faculty to initiate withdrawal procedures for them. If you wish to drop this class, you may do so through Corsair Connect. Students may process a drop for themselves through 75% of the class, which is through the 12th week in a regular semester. Data regarding the withdrawal parameters for each class are provided within each student’s individual Corsair Connect account.


### Official Course Information

Link to official course outline -
http://www.cerricunet.com/SantaMonica/reports/course_outline_html.cfm?courses_id=241

### Catalogue Description

This course is a continuation of Chem 21, with emphasis on the remaining functional groups and types of reactions. Also included is an introduction to the organic chemistry of biochemical compounds. Chem 22 includes lecture and discussion. The second semester of organic chemistry laboratory is a separate course, Chem 24. Chem 21 and 22 constitute two semesters of organic chemistry with one semester of organic chemistry laboratory. Chem 21, 22, and 24 constitute two semesters of organic chemistry with two semesters of laboratory.

### Content

Reactions and Nomenclature of Ethers, Including Epoxides, and Organosulfur Compounds; Aromaticity; Reactions and Nomenclature of Benzene and Substituted Benzenes; Nomenclature of Aldehydes, Ketones, Carboxylic Acids, and Carboxylic Acid Derivatives; Nucleophilic Acyl Substitution Reactions of Carboxylic Acids and Carboxylic Acid Derivatives; Nucleophilic Acyl Substitution Reactions and Addition-Elimination Reactions of Aldehydes and Ketones; Reactions Involving Enolates, and Related Species, of Carbonyl Compounds; Oxidation-Reduction Reactions of Organic Compounds; Reactions and Preparation of Amines; Heterocyclic Organic Compounds; Bioorganic Compounds—Lipids, Carbohydrates, Amino Acids and Peptides; Pericyclic Reactions

### Student Learning Outcomes

As assessed by: questions on exams.

1. The student will follow a logical process based on well-established scientific principles and demonstrate the ability to use the appropriate problem-solving techniques to solve a scientific problem such as an organic synthesis comprised of three or more steps, or a determination of the structure of an organic molecule or biomolecule based on chemical evidence.

2. The student will explain observable phenomena using appropriate scientific theories, such as writing a reaction mechanism consistent with observed facts or determination of a compound as aromatic, nonaromatic or antiaromatic by evaluating its structure and/or bonding and utilizing its classification to predict its chemical reactivity.

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### Study Advice

Chemistry is not a spectator sport—reading the book and watching the instructor work problems will not be sufficient. The only way to learn to work problems is by working them yourself (without looking at the solutions). Read the appropriate chapter sections and work the problems as we cover them in lecture. Do not wait until the last minute to work the problems. It is often helpful at least to skim the chapter (read the headlines) before we cover it in lecture. If you have difficulty with a problem, try rereading the appropriate section(s) or your lecture notes and/or the book, looking at worked-out problems of the same type, etc. If you get totally frustrated with a problem, don’t get hung up on it—go on to something else for a while. **Study strategies** that students have found useful in the past include study groups, flashcards, working questions from old tests and quizzes, reworking assigned problems and examples, and reviewing their tests before the final exam.

*Last revised 2/18/2015*