COURSE: Organic Chemistry II - CHEM 2020
SEMESTER: Fall 2012 – Spring 2013
INSTRUCTOR: Dr. Matthew D. Smith, Office NCSI 119, Phone 585-6881
E-Mail – Matthew.Smith@ws.edu

Course Contact: Dr. Jeff T. Horner, Dean of Natural Science, Office NSCI 126,
Supervisor: Phone: 423-585-6954, E-Mail: Jeff.Horner@ws.edu
Office Hours: Instructor’s Office Hours are posted on his office door.
FAX: 423-318-2762
Secretary: 423-585-6865 (Sherry Woody)

REQUIRED TEXTBOOK

CATALOG DESCRIPTION
An introductory sequence course in organic chemistry which considers the occurrences, structure, properties, and uses of the more important classes of organic compounds. Concepts such as mechanisms of reactions and the relationships between structure and properties are developed. Topics covered are: aromatic compounds, electrophilic aromatic substitution, oxidation and reduction reactions, organometallic compounds, aldehydes, and ketones, carboxylic acids and their derivatives, amines, and synthesis and reactions of β-dicarbonyl compounds. Prerequisite: CHEM 2010 - 3 Semester credits.

COURSE OBJECTIVES AND COMPETENCIES
In this course students will acquire and demonstrate the competencies needed for advanced studies in chemistry, biochemistry and related disciplines or to obtain industrial positions as laboratory technicians. Students will master skills in interpreting graphic and tabular data, in using models to explain chemical phenomena, in working with qualitative, quantitative and spectral data. Students will also understand the benefits derived from the use of organic chemistry, chemical engineering and chemical technology to enhance the quality of life on our planet and the importance of balancing our needs with our environment.

COURSE TOPICS
1. Dienes, Conjugated Systems, and Pericyclic Reactions (Continuation)
2. Benzene and the concept of Aromaticity
3. Reactions of Benzene and Its Derivatives
4. Spectroscopic Methods of Structure Determination (IR, NMR, Mass Spec)
5. Introduction to Organometallic Chemistry
6. Aldehydes and Ketones
7. Carboxylic Acids
8. Functional Derivatives of Carboxylic Acids
9. Enolate Anions and Enamines
10. Amines
11. Selected Topics (Biochemistry, polymers, etc)
How to Succeed at Organic Chemistry – Dr. Smith’s Philosophy

Organic chemistry encompasses a wide array of fields including medicine and pharmaceuticals, polymers, oil refining, the makeup you may (or may not) have put on, the chemicals in the coffee that allow me to function every morning, and almost any other science related profession. It is for that reason that you are sitting in this class. Due to the intense nature of the course, there are still valuable skills that can be gained from how this course MUST be approached that will aid you in the future even if you are headed down a road that will not require organic chemistry on a routine basis.

First, there is A LOT of information in this class. Therefore, constant and continuous studying is essential. I highly recommend flash cards to learn the multitude of reactions, mechanisms, functional groups, etc. that will be presented in this course. You will not be able to wait until the last minute to study the material. Even though this may have worked in previous courses, I can almost certainly guarantee that it will not work in this class. The main reason this approach will not work is because the exams will require you to apply what is in your notes rather than merely give the material back to me. As a starting point, I would recommend tripling the amount of study time that you put forth in general chemistry.

So how should you study? It all starts with an awesome set of notes. As stated above, it is much more than trying to memorize your notes. You need to understand and memorize the GENERAL principles and schematics presented in your notes. Then ask yourself if you can explain those principles using the examples that we discussed in class. Next, it is essential that you try multiple problems that test these skills. One of the worst things that you can do is to work the same two or three problems over and over and over. This will lull you into the false sense that you understand the underlying concepts, but chances are you have just memorized the steps to those few problems. Always check yourself with a new and slightly different problem when you think you fully understand the topic.

Second, students always want to know what is important for them to know from the material in order to best prepare for the upcoming exam. This is a trick question because everything continually builds on itself. I know, I know...every professor tells you that. Believe me, this time you are being told the honest truth. The one aspect of this that will be the most difficult is the multitude of reactions. As we move through the course, synthesis (making one molecule from another through a series of reactions) will be a common theme. Therefore, reactions from previous chapters must be recalled (cue the flash cards) and applied. This continually comprehensive approach to learning will be essential in many graduate fields of study where a complete and thorough understanding of ALL related material is required.

Lastly, if you dread this class from the get-go, it WILL be a miserable experience. Push all of the negative that you have heard about organic chemistry to the side and give it an honest attempt. It is only impossible if you make it that way. I have an open-door office policy. If you are having trouble please come by and see me. It is amazing what can be worked out over a cup of coffee and a little chemistry elbow grease.

PROBLEM SETS:
Suggested practice problems will be provided from each chapter. You will not be required to turn these in.
METHODS OF INSTRUCTION:
1. Lectures
2. Class participation and discussion

EVALUATION:
1. Exams/Assignments/Quizzes Distributed to equal 60%
2. Final Exam 40%

Grades will be determined by the student's percentile rank as follows:

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<tr>
<th>Percentage</th>
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<tr>
<td>A = 90-100</td>
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<td>B = 80-89</td>
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<td>C = 70-79</td>
<td>70-79</td>
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<tr>
<td>D = 60-69</td>
<td>60-69</td>
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<tr>
<td>F = 0-59</td>
<td>0-59</td>
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Missed Exam Rules:
You should plan accordingly to be here for each exam. If you must miss on an exam day, the exam score will be a zero unless the reason is excused. In order for an absence to be excused it must be (1) school related and verifiable by the director of the event or (2) presented to me in email/phone/person no later than 24 hours after the exam start time and I will determine if it is a legitimate absence. The excuse needs to be verifiable (Dr. excuse, etc). Inadequate preparation or “not knowing there was an exam” are not examples of legitimate excuses. If the absence is excused then a make-up exam will be given. If the absence is not excused, the grade remains a zero.

Extra Credit:
There will be five (5) bonus points on each exam so that a possible 105/100 can be earned.

Students may also attend a professional, scientific meeting for extra credit. Students must provide a program or proof they were in attendance. A brief paragraph summarizing the meeting and a personal reflection of it will also be required. This is will be worth up to five (5) points on your lowest lecture exam.

In order to make the assignment of final grades fair to everyone, I will not be offering any additional extra credit. There are several reasons for this: First, I really feel that these opportunities are more than generous. Second, the aim of the class is to get a solid understanding of chemistry so that grades reflect our abilities to communicate the material and not some mundane, supplementary assignment or task. All students, especially those that feel they are struggling with the material, are strongly encouraged to use office hours, send emails, make appointments for extra help, etc. throughout the semester.

New Technologies:
Throughout the semester various technologies (apps, videos, electronic, step-by-step practice solutions) will be uploaded to eLearn or made aware to you during lecture. Your input concerning these tools will be collected in order to make improvements.
**Course Ground Rules:**
Students should attend the first day of class or contact the instructor prior to the first class. Failure to do this may result in being dropped from the class.

Plagiarism, cheating, and other forms of academic dishonesty are prohibited.

Students with disabilities must register with Student Support Services (CCEN), Room 262 (phone 423-585-6892) if they need any special facilities, services, or consideration.

Students in need of tutoring assistance are encouraged to contact the Office of Student Tutoring located in the College Center (CCEN), Room 261. The phone number is 423-585-6920.

Students receiving any type of financial aid or scholarship should contact the Financial Aid Office before making any changes to their schedule. Schedule changes without prior approval may result in loss of award for the current term and future terms.

Students who have not paid fees on time and/or are not correctly registered for this class and whose names do not appear on official class rolls generated by the Admissions and Records Office will not be allowed to remain in class or receive credit for this course.

Cellular phone use during classroom interaction is prohibited. Cellular phones must be turned to the non-audible mode until after class, at which time calls can be received or checked. (See the Walters State Catalog/Handbook)

For information related to the cancellation of classes due to inclement weather, please check the college’s Web site at [www.ws.edu](http://www.ws.edu) or call the college’s student information line, 1-800-225-4770, option 1; InfoConnect, (423) 581-1233, option 1045; the Sevier County Campus, (865) 774-5800, option 7; or the Greeneville/Greene County Center for Higher Education, (423) 798-7940, option 4. Also, please monitor local TV and radio stations for weather-related announcements. For additional information on this policy see the college catalog.

In the event of a pandemic or other college declared critical event that impacts the college’s ability to proceed with academic course activities as planned, the college reserves the right to alter this course plan. In the event of a pandemic or other event, please refer to the college’s home web page, [www.ws.edu](http://www.ws.edu) or call InfoConnect, (423) 581-1233 for further information.

Regular class attendance is a student’s obligation. (See the Walters State Catalog/Student Handbook) If for some reason a student misses class, it is his or her responsibility to see the instructor regarding missed assignments and/or activities and to be prepared for the next class. Excessive absences may substantially lower the semester grade. The college requires the instructor to keep accurate records and to report when students are not attending class.

Students are required to supply a #2 pencil for each lecture exam.

The wearing of hats and caps in class is not allowed! Students will be asked to remove their hats and caps.
STAY AWAKE IN CLASS. Your mere presence in class is not sufficient—you must be able to actively process the information presented! Sleeping in class is disruptive in two ways: the student who is snoozing is not interested and not participating in the classroom discussion; secondly, sleeping in class is considered to be disrespectful to the teacher and other students. The penalty for sleeping in class may range from the student being requested to leave the class with a following conference with the instructor, to notification of the Vice-President of Academic Affairs (in the cases of habitual sleepers). If you have a medical condition that prevents you from staying awake in class, please discuss this with the instructor.

Safety:
1. There will be NO food, drink or tobacco products in the laboratory.
2. NO opened-toe shoes can be worn during lab. You will not be allowed to stay in the laboratory if the lab exercise uses any sort of glassware or chemicals.
3. NO purses, bags or coats on top of the student tables.
4. NO visitors in the laboratory without prior approval of the instructor.

Your Right to Know:
Tennessee Law requires that you are provided notice that some of the laboratory exercises involve contact with chemicals which have been identified with potential health hazards. These chemicals include, but are not limited to: acetone, chloroform, formalin, acids and bases. While every effort has been made to make the materials as safe as possible these chemicals are toxic and you must be responsible for their safe handling. If you feel you may be at a higher risk then normal, if pregnant for example, we recommend you consult your physician.

WSCC Catalog Notification Statement:
All students attending Walters State Community College, regardless of the time and location of the class, must abide by the rules and regulations outlined in the current Walters State Catalog/Student Handbook and the current “Walters State Timetable of Classes.” A copy of the Catalog/Handbook and the “Timetable of Classes” may be obtained from the Admissions Office on the Main campus or at any of our off-campus sites. You may also access the Catalog/Handbook on-line at the following web address: http://www.ws.edu/catalog.

Alternative Teaching Plan
In the event of a pandemic or other college declared critical event, the lead faculty member for this course will use eLearn to communicate with the students. If the lead faculty member is affected by this event, another member from the teaching team will assume instruction for the course. The course will continue utilizing an online format of instruction and testing.

ATTENTION: The Natural Science faculty members are concerned with proper academic advising of students in ALL Pre-Professional programs. It is our explicit desire to help you with any advising problems you may encounter.