**Marshall University Department of Chemistry Spring 2014**

**Organic Chemistry I CHM 355 Dr. Ken O’Connor**

**Credit hours**: 3.00

**Prerequisite:** a C or higher in CHM 212 Phone: 304-696-4358

**Class meets**: T, Th at 12:30 – 1:45 pm

**My Office:** Science-498 **Email:** [oconnor9@marshall.edu](mailto:oconnor9@marshall.edu)

**Office Hours:** M/W from 10-11AM and 2-3 PM; T/Th 2-3 PM and F from 10-11 AM and by appointment**.**

You are welcome to stop by outside of these times and see if I am available or make an appointment with me.

**Required Texts:** Sorrell, Thomas, “Organic Chemistry”, Second Edition, University Science Books, 2006, ISBN: 1-891389-38-6. Molecular models are suggested but not mandatory. They will definitely help with certain chapters of this course so that you can “see” molecules in 3D. Purchasing the “Solutions to Exercises” book is also suggested, ISBN: 1-891389-40-8. My copy of the solutions manual can be used in my office should you not decide to buy one yourself. **Students also are required to bring a Turning Point Technology clicker with them to every class.**

**Clickers:** You can purchase a clicker (personal response system) from the bookstore or you can purchase one from the on-line store through Turning Technologies, our university-adopted clicker company. You need to have a clicker purchased by the Thursday of the first week of class.

Visit: *store.turningtechnologies.com  (copy and paste this into your browser)*

The school code for Marshall is: *mar1*

**Additional Suggested Text:** My students have found that the text book by David Klein called “*Organic Chemistry as a Second Language*” to be a good supplement to the text book for Organic I. This book explains organic chemistry in a way that everyone can understand. I have based some of my lecture notes on the way in which some of the course content is explained in this book. I endorse this book fully. This book is a essentially a workbook and it contains many problems and the answers are at the back of the book.

**COURSE PHILOSOPHY:** My sincere goal is to teach you organic chemistry. How will I do that? I am specifically teaching this course so that it is not all lecture based. I encourage student/teacher interaction. It makes our experience together in the classroom more enjoyable. I will present some information in class and then test you on it to determine how well the class has understood what I am saying by using clickers. It takes a significant amount of extra time to teach the class this way. But my goal is to have you learn organic chemistry as I am teaching it. I will give you as much time as I can to answer each clicker question. There is a delicate balance between covering all of the class content and spending too much time on answering clicker questions. My goal is to achieve that balance. I’m always available to help you.

**Texting:** During class, texting is not permitted.

If you use a laptop, I pad, etcetera, to take notes in class, that is fine with me. The technology does exist that allows you to pull up my PowerPoint presentation and write notes on your tablet and save it with the notes recorded on it. This type of technology can be used in the classroom. You can also view the PowerPoints on your cell phone during class if you prefer doing that to printing them off.

**Exams**: At the present time, my intention is for you to take 4 exams and a final. The cumulative final will be given on Saturday, May 3rd from 9 am to noon (if the classroom is available, you can stay until 1pm. The final is usually the most difficult test so your goal should be to do as well as possible on the four lecture tests! Each exam, including the final, is worth an equal percentage of your grade. The lowest exam grade will NOT be dropped. The last day of classes for the university is Friday, May 2nd.

**My Missed Exam Policy: If you are absent on the day of the exam, you need to obtain an excuse from academic affairs. If you have an excuse from academic affairs, I will allow you to make up the exam. If the exam given in class is on a Tuesday, you have until 4pm the following class period (Thursday) to take the exam. If the exam in class is on Thursday, you have until 4pm on the following Tuesday to take the exam. If taking the makeup exam does not happen with this period of time, the final exam will be used as your makeup exam grade.**

**If you do not have an excuse from academic affairs, then the final exam will be used as a makeup exam. You are allowed to take one makeup exam, provided you have an excuse from academic affairs. If you are not in class on the day we have another exam, you will receive a zero on that exam.**

IF YOU HAVE ANY QUESTIONS ABOUT MY POLICY FOR MAKEUP EXAMS, PLEASE DISCUSS IT WITH ME BEFORE THE TEST.

If you have an excuse from academic affairs, you need to take the makeup exam per the guidelines mentioned above (see “My Missed Exam Policy” in bold print).

**Blackboard**: I often use Blackboard to post exam grades. I typically will use your Marshall email address to send you the PowerPoint presentations we are going to be using in class. I suggest that you check your email account frequently.

**Academic University Policies can be found at the following link:**

<http://www.marshall.edu/wpmu/academic-affairs/?page_id=802>

**Academic Dishonesty**

**If you engage in academic dishonesty which includes cheating on tests, you are committing an act of academic dishonesty. If you are given an assignment or a test and it is not your work and only your work, then you will be accused of academic dishonesty. For more information, visit this website:**

[**http://www.marshall.edu/academic-affairs/?page\_id=802#AcademicDishonesty**](http://www.marshall.edu/academic-affairs/?page_id=802#AcademicDishonesty)

**Course Objectives**: Students will be able to be proficient in the following topics (not all topics are listed).

1) Nomenclature of organic compounds.

2) Hybridization, geometry, Lewis Dot Structures and drawing resonance structures

3) Conformations of organic molecules.

4) Stereochemistry of organic molecules.

5) Acid-Base reactions and reaction coordinate diagrams.

6) Substitution reactions of alkyl halides (SN1, SN2).

7) Substitution reactions of alcohols and related compound.

8) Elimination reactions of alkyl halides, alcohols and related compounds.

9) Addition reactions of alkenes and alkynes.

10) Addition reactions of conjugated dienes.

11) Oxidation and reduction reactions.

12) Free radical reactions in organic molecules.

**Three Strike Rule**: Effective January 2005, the chemistry department has a policy that no one may take CHM 355 a third time unless s/he has successfully completed CHM 254. A withdrawal counts as an attempt. Taking CHM 355 for a third time after taking CHM 254 is the last time a student will be allowed to take CHM 355 at Marshall University. If you have taken CHM 355 twice, you must take CHM 254. After taking CHM 254, you can take this class, CHM 355, one more time.

**Getting Tutoring Assistance**

The Academic Support Center located in Laidley Hall offers FREE tutoring to all Marshall University students **two hours per week.** A Marshall University tutor is available to tutor you Monday thru Friday at University College on campus. Please check out their website (<http://www.marshall.edu/wpmu/uc/tutoring-services>) for additional directions if you need them. The center is located on the main campus near Gullickson Hall and is quite easy to find.You will need to fill out an application to request a tutor and someone will be assigned to you. For additional assistance, you can call Patricia Gallagher (304-696-3464) or email her ([gallaghe@marshall.edu](mailto:gallaghe@marshall.edu)). Your request should be made as soon as you realize you are experiencing some difficulty. Please do not wait too long before going to a tutor for help! If you need more tutoring time to master a particularly difficult subject please do not hesitate to go for additional tutoring or come and see me. Tutoring is most effective when you utilize it before cramming.

**Support Services**

All of the information that you will need in terms of Marshall University policies can be accessed by going to: <http://www.marshall.edu/academic-affairs/?page_id=802>. Alternatively, you can use the link to the Academic Affairs website [www.marshall.edu/academic-affairs](http://www.marshall.edu/academic-affairs) and click on the link to “Marshall University Policies” on the right side of the page.

**“Policy for Students with Disabilities:** For more information, please visit <http://www.marshall.edu/disabled> or contact Disabled Student Services Office at Prichard Hall 11, phone 304-696-2271.

**Exam dates**: I will give an exam approximately one week after the material covered on the exam is discussed in class. In terms of the chapters covered on each test, this is my current plan and is subject to change:

Exam 1: Chapters 1, 2

Exam 2: Chapters 3, 4, 5

Exam 3: Chapters 6-8

Exam 4: Chapters 9, 11

Exam 5: Final Exam covers chapters 1-12. This is cumulative, so please give yourself enough time to prepare for it.

**PLEASE NOTE**: I will retain the exams. Please do not let this concern you in terms of preparing for the final exam. You will be able to study for the final exam by reviewing the Power Point slides, in addition to using homework problems, practice tests and coming to my office to review any exam that you have taken during the semester. You will have an opportunity to look over your exam and take any notes that you would like to take. There is a previous exam of Exam 3 posted on Blackboard. Everyone in the class should review that exam before taking Exam 3.

**Homework**: You should make an attempt to try to solve as many of the exercises in the chapter as well as at the end of the chapter. No credit is given for doing the homework.

**Recitation Sections**: Two learning assistants will meet with you each week to review content recently covered in class. Attendance is mandatory and attending these sessions will be worth 3% of your grade.

Your average on tests and recitation section is = (0.97)(Test average grade) + (0.03)(recitation section grade)

**If you have a 90% test average and a 100% recitation section grade, this average would be calculated as: (0.97)(90) + (0.03)(100) = 90.3%**

Your recitation grade is based on attendance at the recitation sections. Attendance is mandatory.

The Learning Assistants will keep track of your attendance.

Your **final average** in the class depends on clicker questions (see next section).

**Clicker Questions:** My goal is to teach the class content so that you are able to understand the course material and answer the clicker questions correctly as often as possible.

**Clicker Question Points:** You will have the opportunity to increase your final grade for the course by 0.5 to 1 extra point by answering clicker questions during class. The points you obtain are based on the percentage of clicker questions that you answer correctly.

25-50% clicker questions correct: 0.5 extra point

>51% clicker questions correct: 1 extra point

This 0.5 to 1.0 extra point is added to your average obtained on tests and recitation section grade. To use the example given above, if you answered 51% of the clicker questions correctly, your final average in the class would be **90.3% + 1 = 91.3%**

**Clicker Questions in Class**:

The biggest challenge is to find a balance between using clicker questions in class and lecturing. The goal of the clicker questions is to enable you to continually be engaged during lecture and realize the content areas that you need additional help in. It also allows me, as the instructor, to determine the concepts that I need to review during lecture. Therefore, it is very important that you bring your clicker to class every day. You will also obtain clicker question points by attending class.

**Grades**: I know how important grades are to you and the grading policy is as follows.

**A= 90.0-100%, B= 89.9-80.0%, C= 79.9-70.0%, D= 69.9-60.0%; F = less than 60.0%; any student with an overall average less than 60% will receive a grade of F.** This is the grading scale that is used to calculate your final course grade and it is based on your test average, your attendance at the recitation sections and clicker points. **Therefore, if your test and recitation section average is 89%, then your overall average could increase from 89 to 90% by adding one clicker point.**

**It is important to remember that the grading scale is based on all the points you have obtained in class (tests, recitation sessions and clicker points). I will review this in class to make sure you understand how your grade is calculated.**

**Do you really know the material?**

**Answer**: It is strongly suggested that students review the PowerPoint slides discussed in class, any practice tests, worksheets and suggested homework problems available to you. You need to make sure that you really understand the material. That means reviewing EVERYTHING to ensure that you really know it. If you cannot solve the problems on the worksheets and in the Power Point slides, you will not do well on the exams.

**Important:** In terms of the first test, very few people who obtain less than a 70% on the first test are able to pass this course. If you obtain an A, B or C on the first test, your chances of passing this class are much better than if you obtain a D or lower on the first test. In addition, tests 3, 4 and the final exam are the hardest tests. Therefore, your goal should be to do as well on exams one and two so as to maximize your chances of obtaining the grade that you desire to earn in this class.

In addition, understand your notes inside and out! I also provide **worksheets** and **practice tests** for you to use during the semester. I need your sincere commitment to studying this subject sufficiently so you can perform well on tests.

**Don’t make the same mistakes other students make**:

a) Wait too long before coming for help. Procrastination will prevent you from passing this course.

b) Bomb the first test before getting serious about studying.

c) You are in denial. You deny the fact that you need to spend more time studying.

d) If you are retaking this course and don’t think you need to study hard for the first test because you know it already, you are making a big mistake.

Wishing you a successful semester,

Dr. O’Connor