

## CHEMISTRY 313DL – Organic Chemistry I Syllabus

### Instructor Info:

**Professor:** Kimi S. Hatton, Ph. D.

**Email:** shatton@gmu.edu (email is preferred)

**Phone:** 703-993-1078

**Office:** PLANETARY HALL Rm 309

**Office Hours:** In person, you can find me in my office during office hours or by appointment; you are free to visit me in my office during these times, but I will also be logged into Blackboard Collaborate if you would like to virtually meet. In our Blackboard course shell, Blackboard Collaborate is located on the menu on the left side of the page. Click there and follow the instructions to launch the software. There will be several steps and prompts. Be certain to click yes to all of them. Make sure to always run the AUDIO WIZARD when you log into Blackboard Collaborate. For more information on how you can use Blackboard Collaborate, please visit the **Information** section located on the MENU of our Blackboard course shell where there are several links for help with BC.

Please note that the instructor will do everything in her power to reply promptly to your emails. However, please allow a 48-hour response time to all inquiries received Monday through Friday and 72-hour response time for those received over weekends and/or holidays. Most questions can be answered by visiting the course syllabus and sections located in the course Blackboard shell, so be sure to start your search there.

### Course Materials:

#### **Required:**

##### **Textbooks:**

1. Organic Chemistry, 12th, Graham Solomons and Craig Fryhle, authors, John Wiley and Sons, New York, 2016 or the MASON custom versions available in the bookstore (the 2 volume set is offered at a much reduced price and can be used with CHEM 313 and 314, also comes with an electronic textbook, and free access to Wiley Plus).
2. Study Guide and Solutions Manual to accompany textbook.
3. Organic Chemistry as a second language, latest edition. David R. Klein, John Wiley and Sons.
4. Molecular models

##### **Online Homework:**

1. Details are to be announced. Online homework will not be available until the second week of class. Please practice textbook problems.

##### **Video Presentations:**

1. Lecture Slides are from Solomons 10th edition and have been used to make the Video Chapter Presentations. The video Chapter Presentations are located in the Presentations folder for each Chapter in the Blackboard course shell. A copy of just the slides is available at <http://bcs.wiley.com/he-bcs/Books?action=index&itemId=0470401419&bcsId=5562>. These slides can be printed if need be and are free of charge.

### Lecture Topics/Reading Assignments:

Topic(s)	Chapter	Read:
Carbon compounds, chemical bonds, review	Chapter 1	p. 1-49 (from Hardback text)
Functional Groups, intermolecular forces	Chapter 2	p. 55-85
Organic Reactions, acids, bases	Chapter 3	p. 104-137
Alkanes, conformations and intro to Synthesis	Chapter 4	p. 142-186
Chirality and Stereochemistry	Chapter 5	p. 191-234
Nucleophilic substitution, elimination	Chapter 6	p. 239-284
Alkenes and alkynes I	Chapter 7	p. 291-329
Alkenes and alkynes II	Chapter 8	p. 337-382
Reactions involving radicals	Chapter 10	p. 457-459, 462-483
Alcohols and ethers	Chapter 11	p. 498-535

### Grading:

The average and/or total points you earn in the course from four exams, Blackboard Collaborate online sessions or in person meetings, and homework from the online system will serve as the basis of your final grade. The final grade will be calculated with the following weighting factors for each component: the average of four exams will account for 85 % of the grade, the ONLINE HOMEWORK will account for 5 % of the grade and the participation in Blackboard Collaborate online sessions and/or in person sessions 15%. You are required to attend one online session or one face to face session per week. Grades are determined using a curving system. For the exams, there are 4 midterms and the final exam. From the four midterms, the lowest score will be dropped, and the highest 3 will count toward 65% of the grade. The final exam must be taken and counts for 20%. The average score of the class on a single exam sets a grade of C for that particular exam. Your final grade in the course is determined by averaging your four exam scores, homework, face to face sessions and online sessions together and comparing your course average to the class's average for the course or total points. The final exam must be taken to earn a final grade for the course. There are no make-up exams given in this course.

### Participation in Online Course Evaluations

Student input into course evaluations is extremely important to my course development. In addition to dropping the lowest midterm grade, I will add 5% to the lowest score from the three remaining midterm scores if class participation in online course evaluations reaches 80%. I know nothing of who participates at anytime, only the number of students who have responded. Your anonymity and my absence of influence on what you say are preserved. After grades are entered, your evaluation score and comments about the course are given to me later the next semester. At no time will I ever know the identity of any particular scorer or commenter.

It is often helpful to realize we have certain learning objectives in a course and that teachers strive to reach these goals.

### Assignments:

<b>Learning Objectives:</b>	Online homework (Sapling Learning)	Quizzes	Exams	Final Exam	Blackboard Collaborate (synchronous discussions)	Presentations
1) <i>Chemistry body of knowledge: Students will be able to use knowledge of chemistry in the successful design, analysis and interpretation of a scientific investigation. Students are expected to attain a comprehensive understanding in the foundations of analytical, inorganic, organic, biochemistry and physical chemistry theory.</i>	✓	✓	✓	✓	✓	✓
2) <i>Experimental design: Students must be able to apply competent skills in general laboratory techniques and in the operation of chemical instrumentation and computer technology.</i>				✓	✓	✓
3) <i>Critical and analytical thinking: Students will be able to design experiments, collect suitable data related to the goals of the study, intensively analyze results, and interpret the significance of new findings. Students must be able to think critically while analyzing data to derive a clear, definitive, and concise scientific conclusion.</i>	✓		✓	✓		✓
4) <i>Communication: Students will be able to communicate clearly in both writing and oral presentations. Students must demonstrate competence in technical writing and in the communication of scientific information.</i>		✓	✓	✓	✓	

5) Understand how scientific inquiry is based on investigation of evidence from the natural world, and that scientific knowledge and understanding: a. evolves based on new evidence b. differs from personal and cultural beliefs	✓	✓	✓	✓	✓	✓
6) Recognize the scope and limits of science			✓	✓	✓	✓
7) Recognize and articulate the relationship between the natural sciences and society and the application of science to societal challenges (e.g., health, conservation, sustainability, energy, natural disasters, etc.).					✓	✓
8) Evaluate scientific information (e.g., distinguish primary and secondary sources, assess credibility and validity of information).	✓		✓	✓	✓	✓
9) Participate in scientific inquiry and communicate the elements of the process, including: a. Making careful and systematic observations b. Developing and testing a hypothesis c. Analyzing evidence d. Interpreting results					✓	✓

<p><i>Course Specific Outcomes: Learn the chemistry of carbon containing compounds, functional groups, conformation analysis, isomers, acid base chemistry, nomenclature IUPAC and common emphasis on three dimensional shape and absolute configuration of molecules or stereochemistry, synthesis and reactions of alkanes, alkenes, alkynes,</i></p>	✓	✓	✓	✓	✓	✓
<p><i>mechanisms of SN1, SN2, E1 and E2 reactions, free radical chemistry, synthesis and reactions of alcohols and ethers.</i></p>						

**Examinations and Exam Content:**

**Exams are in written and multiple choice style. Five scantrons are required. No. 882-E.**

**Exams:**

1. Chapters 1-3
2. Chapters 4 and 5
3. Chapters 6, 7 and 8 in part
4. Chapters 8 in part, 10 (shortened) and 11

**Final Exam:** The final exam is a standardized American Chemical Society cumulative exam.

**The exam room will be announced early in the semester.**

Please note that molecular models may be used during all exams with the exception of the final exam.

## Course Procedures:

**Extra credit policy:** No extra credit work is permitted.

**Attendance:** You are required to attend and be prepared to answer questions, participate, ask questions, be prepared for a quiz or other learning activities in at least one online session per week (via Blackboard Collaborate) or one in person meeting per week. If you are joining us from out of town (do not live in the Mason area), please discuss this with me if you believe you have to drop the course for this reason. The schedule for these meetings, both online and in person, will be posted in the blackboard menu. Please feel free to come to more than one meeting per week!

For exams, you are expected to show up on the dates and times that appear in this syllabus. If you have a scheduling conflict, please inform me as soon as possible. No make-up exams or alternatively timed exams are allowed. One absence from an exam will only be tolerated with a physician's note or other appropriate documentation. No after the fact or "sorry I missed the exam, but..." type of excuses will be tolerated. Send an email at the earliest possible time. For individuals with more than one missed exam, the additional missed exams will count as a zero toward the final grade.

**Cancellation:** If an online class must be cancelled or an exam cancelled due to inclement weather or other reasons, I will notify you by email at the earliest possible opportunity.

**Weather policy:** If class is cancelled due to inclement weather on an exam date, I will announce a make-up period for the exam as soon as possible.

**Behavior policy:** You are expected to refrain from talking to yourself or others, whispering, eating, crunching paper, playing computer games, working on other things, text messaging, typing and any other similar activity or disruptive activity. **Please be aware that while you are online, most any other noise is picked up by your microphone.** Please make sure your cell phone is turned off or is out of the room for online meetings. Make sure to act, speak and write in a manner that is kind and courteous to all human beings.

## Other Important Information:

All students are expected to activate their George Mason University email accounts by today as Email serves as an official form of communication between students and professors. **Any email you send to me must be through your GMU account.** I am unlikely to read or answer it, and it may be deleted otherwise. Importantly, clean out your email account on a regular basis – your sent box, inbox and trash items all take up space in your email account. Place all extraneous items in the trash and empty it. All too many times do I send email to students only to have it returned to me with a message "over quota." You are responsible for any information I send via GMU email. Often I will also post information to Blackboard as well.

**Important deadlines:** Please refer to the Mason Web page for important deadlines, such as add and drop deadlines during the semester: <http://registrar.gmu.edu/calendars/>

**Mason Email Accounts:** Students must use their MasonLIVE email account to receive important University information, including the messages related to this class. See <http://masonlive.gmu.edu> for more information.

**Office of Disability Services:** If you are a student with a disability and you need academic accommodations, please see me and contact the Office of Disability Services (ODS) at 993-2474. All academic accommodations must be arranged through the ODS. <http://ods.gmu.edu>

### **Useful Campus Resources:**

**University Libraries:** University Libraries provides resources for distance students. [See <http://library.gmu.edu/distance> for more information].

**Writing Center:** The George Mason University Writing Center staff provides a variety of resources and services (e.g., tutoring, workshops, writing guides, handbooks) intended to support students as they work to construct and share knowledge through writing. [See <http://writingcenter.gmu.edu>]. You can now sign up for an Online Writing Lab (OWL) session just like you sign up for a face-to-face session in the Writing Center, which means YOU set the date and time of the appointment! Learn more about the Online Writing Lab (OWL) (found under Online Tutoring).

**Counseling and Psychological Services:** The George Mason University Counseling and Psychological Services (CAPS) staff consists of professional counseling and clinical psychologists, social workers, and counselors who offer a wide range of services (e.g., individual and group counseling, workshops and outreach programs) to enhance students' personal experience and academic performance [See <http://caps.gmu.edu> for more information].

**Family Educational Rights and Privacy Act (FERPA):** The Family Educational Rights and Privacy Act of 1974 (FERPA), also known as the "Buckley Amendment," is a federal law that gives protection to student educational records and provides students with certain rights. [See <http://registrar.gmu.edu/privacy> for more information].

### **Student Expectations:**

**Academic Integrity:** Students must be responsible for their own work, and students and faculty must take on the responsibility of dealing explicitly with violations. The tenet must be a foundation of our university culture. [[http://oai.gmu.edu/the-mason-honor-code2/?\\_ga=1.168628514.2072550746.1441048970](http://oai.gmu.edu/the-mason-honor-code2/?_ga=1.168628514.2072550746.1441048970)].

**Honor Code:** Students must adhere to the guidelines of the George Mason University Honor Code [See <http://academicintegrity.gmu.edu/honorcode>].

**MasonLive/Email:** Students are responsible for the content of university communications sent to their George Mason University email account and are required to activate their account and check it regularly. All communication from the university, college, school, and program will be sent to students solely through their Mason email account.

**Patriot Pass:** Once you sign up for your Patriot Pass, your passwords will be synchronized, and you will use your Patriot Pass username and password to log in to the following systems: Blackboard, University Libraries, MasonLive, myMason, Patriot Web, Virtual Computing Lab, and WEMS. [See

**Responsible Use of Computing:** Students must follow the university policy for Responsible Use of Computing.

**Students with Disabilities:** Students with disabilities who seek accommodations in a course must be registered with the George Mason University Office of Disability Services (ODS) and inform their instructor, in writing, at the beginning of the semester [See <http://ods.gmu.edu> for more information].