CHM 2211 Syllabus– Organic Chemistry II **Spring 2016**
Department of Chemistry & Physics

Time: Tuesday and Thursday 11:00 AM – 12:15 PM
Location: AB7-115
Credit hours: 3 (CRN# 10516)

Instructor: Dr. Arsalan Mirjafari, Assistant Professor of Organic Chemistry
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Office Hours: Monday 8:00 AM –10:50 AM; additional hours by appointment.

COURSE DESCRIPTION

CHM 2211, a three credit-hour course, is known as Organic Chemistry II. It is offered by the College of Arts & Sciences, intended for science majors. Organic Chemistry II Laboratory (CHM 2211L) is a co-requisite of this course. The course is on the FGCU's Canvas website. You can access and download this syllabus and other lecture materials at https://canvas.fgcu.edu/.

Organic Chemistry II continues the study of organic compounds described in Organic Chemistry I. Reactions, mechanisms, nomenclature and spectroscopy are discussed for benzene, substituted benzene compounds and carbonyls. Oxidation-reduction reactions are studied in greater details.

PREREQUISITE

CHM 2210 with a minimum grade of C and CHM 2210L with a minimum grade of C or CHM 2210C with a minimum grade of C.

MATERIALS NEEDED

- Textbook: "*Organic Chemistry*" by David Klein, 2nd Edition, customized version. ISBN: 9781118944226. Textbook and WileyPLUS are available as a package for FGCU students in this link: http://www.wiley.com/WileyCDA/Section/id-822610.html
- I would recommend to register to WileyPLUS because the e-book is also available on WileyPLUS.

COURSE OBJECTIVES AND STUDENT LEARNING OUTCOMES

The development of critical thinking and problem solving skills is emphasized in this course. The following outlines what the student should know and be able to do upon completion of the course.

- Name and classify aromatics, aldehydes, carboxylic acids, amines, phenols, and compounds containing mixed functionalities and their isomers. Both the common and IUPAC naming systems will be utilized.
- Describe the common reactions and mechanisms of organic reactions of aromatics, aldehydes, ketones, carboxylic acids, amines, phenols, and compounds containing mixed functionalities and their isomers.
- They will compare and contrast the mechanism of these reactions in terms of underlying similarities and differences.

- Utilize the logic of synthesis and the common reaction of aromatics, aldehydes, ketones, carboxylic acids, amines, phenols, and compounds containing mixed functionalities and their isomers, to synthesize organic compounds of greater complexity.
- Interpret a combination of IR, NMR and Mass data to define the structure of a studied compound.

EXAMS AND QUIZZES

Six short quizzes will be assigned and completed at the end of specified lecture classes (see schedule). Each quiz will be worth 15-20 points and will consist of combination of multiple choice (80-85%) and short-answer (10-20%) questions. Quizzes will take on average 20-25 minutes of class time. The instructor reserves the right to assign pop quizzes at random during lecture classes. If you miss a lecture in which a quiz was assigned, you will receive a grade of zero.

There will be *three* scheduled exams during the semester (see schedule). Each exam will be worth 100 normalized points and will be given during class time. Exams will just consist of essay questions. *The final exam will be cumulative. All* of the students must take the final exam at the time specified by the Spring 2016 Schedule of classes. It is anticipated that the final exam will be of the same format of exams and will include materials from all taught chapters.

Both exams and quizzes will cover the material comprehensively. Although the exam dates are set, the material may differ slightly depending on lecture notes. *There are no make-up for exams and quizzes.* Please bring your student ID to all exams.

GRADING

The course grade will be based upon your performance in lecture. The lecture component will consist of the accumulated total points that you have earned. The course grades will be determined in the following manner: A: 100-95%; A-: 94.9-90%; B+: 89-85%; B: 84.9-80%; C+: 79-75%; C: 74.9-70%; D: 69-60%; F" 59% and below. In the event an error has been made during the grading of any scheduled assignment, report the error within two weeks of the scheduled assignment. Success will come to those who engage in a daily immersion of the course material. Mistakes on quizzes and exams will not be continuously awarded. Grades will be posted on Canvas two weeks after the quiz or exam and the deadlines for students to check their grades are two weeks after each exam or quiz.

Homework	5%
Quizzes	27%
Exam 1	16%
Exam 2	16%
Exam 3	16%
Final Exam (cumulative)	20%
TOTAL	**100%**

A format of weekend and/or night prior to the exam binge study sessions will only result in frustration if not early but late in the term. Your proficiency on the subject matter will be held to the highest level of accountability on the exams. The exams are your opportunity to showcase your knowledge of the subject matter. Accordingly, if earned, minor revisions to lower cutoffs may be made when assigning grades. If the class average for Exams 1, 2, 3, or the Final Exam drops below 70%, the scores will be scaled. While implicit, the scaling of exams will not apply to take-home exercises. Simply stated, if you are not present to take a quiz, exam, or final or if you do not adhere to the deadlines posted online with WileyPLUS, your grade will reflect your choices - credit will not be given for work not performed.

Be forewarned that cheating on an exam or quiz will lead to a zero on that exam or quiz and could lead to an F in the course.

MAKE-UP POLICY

A missed exam or quiz results in a grade of "zero" for that exam or quiz. Since exam and quiz grades make up the majority of credit for the course, it is imperative that you are present and prepared for each exam or quiz.

HOMEWORK ASSIGNMENTS

You will have in-class and online homework assignments and they must be completed online through the tutorial, homework and assessment system referred to as WileyPLUS https://www.wileyplus.com/WileyCDA/– if they are not completed by the assigned deadline then no credit will be given. Make sure you register for the correct section).

All assigned book problems represent what I consider to be reasonable test-level problems. There may be a few that are trickier than I'd put on a real test, but the majority are ones you ought to be able to do. All have worked-out answers in the Solutions Manual. The homework is a great way to practice problem solving, assess your progress, and prepare for exams. Since solutions are available in library, I will not collect and grade the book homework. However, a wise student would use these problems to prepare for quizzes and exams. The few take-home assignment problems that I collect and grade are no substitute for doing book homework problems! Likewise I am not sure that the on-line homework will be sufficient.

STUDY STRATEGY

The goal of this course is to help you learn Organic Chemistry, a subject of fundamental importance to a wide range of fields. It is going to require much work on your part but the following hints may be helpful. Some practical study thoughts:

General university policy is that an average student in an average class should study for two hours out of class for two hours in class to get an average grade.

Fact 1: Organic Chemistry is not really an average class and it is very challenging.

Fact 2: However, it is completely manageable if you work hard and practice.

Please do not take this course lightly. The course is structured to offer a comprehensive **overview** of Organic Chemistry. It is your responsibility to learn and apply. The quizzes and exams will provide you with direct feedback on your performance. This will in turn offer you the opportunity to alter, sometimes radically, your approach to this lecture experience.

1. Attend all lectures and study after the class

There is a vast amount of material to be covered and a limited time to do it in. Missing even one lecture may put you irretrievably behind. It is highly recommended that you read the material assigned prior to class as well as dedicate 2-3 hours of quality study-time per lecture hour outside of class. Watching videos before coming to class can help you for efficient learning. You can find many videos in this link: https://www.khanacademy.org/science/organic-chemistry

Putting off the extensive information in Organic Chemistry until the week of an exam will only make it harder on you. After each class, I would recommend to try to study the day's notes and work all of the assigned book problems.

2. Read the textbook

The textbook is a support resource. If you did not understand some of the material in class, the book will frequently have a more complete and detailed discussions that will help you understand things.

3. Work the problems

There are no shortcuts here; working the problems is the *only* way to learn Organic Chemistry. The practice problems show you how to approach the materials. I would strongly suggest reviewing the class notes/slides and practice problems ASAP after a day's class, and going through the material at least twice. Homework assignments will come as end-of-chapter problems from the Klein text; these are alternatively available through WileyPLUS. This is essential for being successful in the course and will help you on the exams. Therefore, I would suggest working book problems associated with the sections covered in class right

after that. Full answers and explanations for the problems are given in the Solutions Manual, which is available in FGCU's library.

4. Use molecular models

Organic Chemistry is a 3-dimensional science. There is no substitute for building a model and turning it around in your hands.

5. Ask questions

I am here to help you. Ask all of your questions in class, office hours or via email (amirjafari@fgcu.edu).

ATTENDANCE/LATE POLICY

The attendance policy is outlined in the University Bulletin and for this traditional lecture experience. Everyone is encouraged to attend each and every lecture experience which for this term is MWF from 11:00 AM– 11:50 AM. Attendance will not be checked each class meeting. No penalty will be assessed for absences, nor will credit be given for attendance. However, it has been my experience that students who are habitually absent from class perform poorly on quizzes and exams. If you miss several lectures, you may find it difficult to catch up with the class.

You are in this class to perform an important function as student. As with any group effort, it takes cooperation and commitment from everyone to operate effectively. Therefore, your punctuality is very important for me of this class. Excessive tardiness (10% of class time) to class results in disruption of class including me and students, loss of academic time, and then finally, reduction of class's success and will not be tolerated and it will be cause for disciplinary action up to and including discharge. To that end, it is extremely important that all students be in the class on time. Students are to be in the classroom and in their seats not later than 4 min after starting the class. Students arriving more than 4 minutes late will not be permitted to attend the class.

LAPTOP/TABLET/CELL PHONE POLICY

Laptops and tablets can be both a benefit and a distraction in a classroom. While many students benefit from taking notes using a laptop, or having access to outside class-related resources during class, other students cannot resist the temptation of checking e-mail, texting, or playing games during class time. This class has a strict "no non-class related use" rule for laptops and tablets. If you are found violating this policy, then your in-class laptop privileges will be taken away.

Cell phone use is strictly prohibited at all times in the lecture. Please silence you cell phones. Texting during class is strongly discouraged. Each time you get caught, 10 percent will be taken off from your upcoming exams.

CANVAS

Canvas is the new Learning Management System (LMS) at FCGU. Canvas is a next-generation LMS for colleges and universities that encourages communication, collaboration and creativity while retaining the essential features of an LMS including quizzes, tests, threaded discussions, assignment upload and more. The Student Demonstration Course covers these essential features to help you become successful with Canvas at https://fgcu.instructure.com/courses/7692

SUPPLEMENTAL INSTRUCTION

It is recommended that you take advantage of the free tutoring available through the Center for Academic Achievement: http://www.fgcu.edu/caa

ACADEMIC BEHAVIOR STANDARDS AND ACADEMIC DISHONESTY

All students are expected to demonstrate honesty in their academic pursuits. The university policies regarding issues of honesty can be found in the FGCU Student Guidebook under the ***Student Code of Conduct*** and ***Policies and Procedures*** sections. All students are expected to study this document which

outlines their responsibilities and consequences for violations of the policy. The FGCU Student Guidebook is available online at http://studentservices.fgcu.edu/judicialaffairs/new.html

DISABILITY ACCOMMODATIONS SERVICES

Florida Gulf Coast University, in accordance with the Americans with Disabilities Act and the university's guiding principles, will provide classroom and academic accommodations to students with documented disabilities. If you need to request an accommodation in this class due to a disability, or you suspect that your academic performance is affected by a disability, please contact the Office of Adaptive Services. The Office of Adaptive Services is located in Howard Hall 137. The phone number is 239-590-7956 or TTY 239-590-7930.

STUDENT OBSERVANCE OF RELIGIOUS HOLIDAYS

All students at Florida Gulf Coast University have a right to expect that the University will reasonably accommodate their religious observances, practices, and beliefs. Students, upon prior notification to their instructors, shall be excused from class or other scheduled academic activity to observe a religious holy day of their faith. Students shall be permitted a reasonable amount of time to make up the material or activities covered in their absence. Students shall not be penalized due to absence from class or other scheduled academic activity because of religious observances. Where practicable, major examinations, major assignments, and University ceremonies will not be scheduled on a major religious holy day. A student who is to be excused from class for a religious observance is not required to provide a second party certification of the reason for the absence. The full FGCU policy is available online at http://www.fgcu.edu/generalcounsel/policies-view.asp

SYLLABUS STATEMENT FOR CENTER FOR ACADEMIC ACHIEVEMENT

The center for academic achievement (CAA) provides academic support service to all FGCU students. Students can take advantage of our free peer tutoring and supplemental instruction sessions for lower-level science course, as well as workshops to facilitate the development of skill necessary for college success. For more information, please visit CAA in Library 103 or call at (239) 590-7906. The CAA website is www.fgcu.edu/caa.

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LECTURE, QUIZ & EXAM SCHEDULE

(This schedule is tentative and may be adjusted as needed)

Week	Date	Concepts Covered
Week 1	1/7	Chapter 18 – Aromatic Compounds
Week 2	1/12	Chapter 18 – Aromatic Compounds
	1/14	Quiz #1 Chapter 19 –Aromatic Substitution Reactions
Week 3	1/19	Chapter 19 –Aromatic Substitution Reactions
	1/21	Chapter 19 –Aromatic Substitution Reactions
Week 4	1/26	Chapter 19 –Aromatic Substitution Reactions
	1/28	Quiz #2 Aromatic Substitution Reactions
Week 5	***2/2***	***Exam #1 – Chapters 18 & 19***
	2/4	Chapter 20 – Aldehydes and Ketones
Week 6	2/9	Chapter 20 – Aldehydes and Ketones
	2/11	Chapter 20 – Aldehydes and Ketones
Week 7	2/16	Chapter 20 – Aldehydes and Ketones
	2/18	Chapter 20 – Aldehydes and Ketones
Week 8	2/23	Quiz #3 Chapter 20 – Aldehydes and Ketones
	2/25	Chapter 21 – Carboxylic Acids & Their Derivatives
Week 9	3/1	Chapter 21 – Carboxylic Acids & Their Derivatives
	3/3	Quiz #4 Chapter 21 – Carboxylic Acids & Their Derivatives
Week 10	*3/8*	*Spring Break – No Classes*
	3/10	
Week 11	3/15	Chapter 21 – Carboxylic Acids & Their Derivatives
	3/17	Chapter 21 – Carboxylic Acids & Their Derivatives
Week 12	***3/22***	***Exam #2 – Chapters 20 & 21*** *Last Day to Withdraw without Penalty*
	3/24	Chapter 22 – α Carbon Chemistry: Enol & Enolates
Week 13	3/29	Chapter 22 – α Carbon Chemistry: Enol & Enolates
	3/31	Chapter 22 – α Carbon Chemistry: Enol & Enolates
Week 14	4/5	Quiz #5 Chapter 22 – α Carbon Chemistry: Enol & Enolates
	4/7	Chapter 22 – α Carbon Chemistry: Enol & Enolates
Week 15	4/12	Quiz #6 Chapter 22 – α Carbon Chemistry: Enol & Enolates
	4/14	Chapter 23 – Amines
Week 16	4/19	Chapter 23 – Amines
	4/22	***Exam #3 – Chapters 21 and 22***
Week 17	**4/26**	***Final Exam – All Chapters*** ***10:00 AM – 12:15 PM; AB7-115***