CHM 2211, Organic Chemistry II, Summer 2023

Section O220: MWR – 1st Period (8:00am-9:15am) Section O221: MWR – online, synchronous via Zoom

All Classroom Meetings can be viewed synchronously on Zoom

Instructor: Dr. Jason D. Portmess (Dr. J) **Office:** Sisler 328

Office Hours: TBA Email: portmess@ufl.edu (ONLY!)

PLEASE DO NOT SEND ME EMAILS VIA CANVAS

Email and Discussion Board Etiquette: We will use typical business hours as our guidance for email and Discussion Board correspondence. If you send me an email (or post a message on our Discussion Board) M-F between the hours of 8am-5pm then I will make every effort to reply on the same day. Any email sent after 5pm (or on the weekend) should never expect a reply, but it will be addressed on the next business day. Unless it is absolutely necessary, I will NEVER send you an email (or Canvas announcement) during "off-business hours", and I would hope you would respect this etiquette and do the same.

Course Description: This is the second of two basic courses that describe the chemistry of carbon compounds. Specific topics to be covered include the main functional group inter-conversions of carbonyl based functional groups (aldehydes, ketones, carboxylic acids, and their derivatives), amines, new carbon-carbon bond forming reactions, and the electronics and structure-based reactivity of aromatic compounds. In addition to the reactivity relationships that will be studied, a cursory investigation of the spectroscopic (IR, NMR and UV/Vis) behavior or these organic functional groups will also be introduced. A solid, pre-requisite understanding of the functional group recognition and transformation reactions of alkanes, alkyl halides, alkenes, alkynes, alcohols and epoxy-ethers are expected. A command of Bronsted and Lewis acid-base behavior are essential skills as they will play a primary role in the understanding and writing of detailed Organic mechanisms that will be emphasized throughout the course.

This course is participating in UF All Access, the least expensive and fastest way to get access to your course materials for the semester. Please visit the Bookstore All Access Site to opt-in and purchase your required Connect code. This will provide you access to the eBook, solutions manual and the OWLv2 online homework assignments.

Text: Brown, Foote, Iverson, Anslyn, *Organic Chemistry*, 8th Edition (recommended) and accompanying, *Solutions Manual, Organic Chemistry*, 6th, 7th or 8th Edition (recommended – **with caution...it can be addictive**).

Lecture Topic Presentations: All course content this semester will be made available to you via our Canvas site. The materials will be presented by utilizing a variety of different presentation platforms (handouts, emails, pre-recorded video lectures, etc.). This platform will allow you to watch the Lecture Topic Presentations (LTPs) at your convenience, but you must maintain a diligent, consistent routine that works best for you (see **PHILOSOPHY** on page 3) to keep up with the OWLv2 online homework assignments and our scheduled assessments. *Organic Chemistry is not a sprint – it is a journey*. No one can become proficient at Shakespeare by reading CliffsNotes, nor can you become proficient in this course by buying LTP summaries. To assist you in your time management, I have prepared a **Weekly LTP Viewing Guide** that can be found on our Canvas site.

Classroom Meetings: For more than 15 years, I have managed my course in the most traditional of methods: I deliver the required content of the course with minimal time available for providing examples or strategies for solving problems, and the students take notes on the content while copying the example problems verbatim without thinking. At the end of the semester, I would read course evaluations and the #1 pedagogical complaint was "there were not enough practice problems during lecture". I could not agree more. Problem: There is a required amount of material that must be covered, but there is such a limited amount of time. Solution: Provide the course materials for the students to view on their own and use our dedicated, scheduled classroom meetings for answering questions, developing strategies, and doing what students want...more practice at solving problems. These classroom meetings will be designed to reinforce the content that is presented in the LTPs (in conjunction with the Weekly LTP Viewing Guide) by using Canvas "Not Graded" assessments, as well as other timely handouts based on our location within the course. The "Not Graded" assessments are clicker-style questions that do not count toward your grade, but your performance on these assessments does matter.

Please DO NOT attend these Classroom Meetings if you are not feeling well. These sessions will be video recorded and made available through our Canvas site. Attending Classroom Meetings can be instrumental to your success in the course, but you will NEVER be penalized for missing sessions.

Evaluation Items for the Semester

1) Organic 1 Review Materials: For more than 10 years, I have provided multiple resources and practice aides to assist students in getting back up to speed from their Organic 1 layoff and varied backgrounds. The highly motivated student will tackle these documents as suggested – during week 1. The less motivated or overconfident student will entertain these items around the time of the first exam which is obviously too late. Consequence: The student has put themselves in a position which can sometimes be impossible to recover. Solution: Make the review process required. These review items are available on our Canvas site on the Organic 1 Review Materials page. You will also find on this Canvas page the details (content and deadlines) for the "Organic 1 Review Materials" assessment which will be worth 30 points towards your final grade. The review items that you will find on this page are there for your practice (not for credit), but they should prepare you for the "Organic 1 Review Materials" assessment. I have also set up some timed, practice Canvas assessments, to give you that funny feeling in your belly that you must manage during examinations. Again, these are NOT for graded credit – just for your practice. What will count for actual graded credit will be the "Organic 1 Review Materials" Assessment that will be delivered via Canvas.

Setting the tone early: In Fall 2021, the students that earned 80% or higher on the "Organic 1 Review Materials" or more had a final course average in the class of 78.9%. Those who scored less than 20 pts on the "Organic 1 Review Materials" Assessment had a final average of 65.3%. Some of you understand how you got to this point, while others blindly followed your phone's GPS. If you are not sure which group you belong to, then these Organic 1 Review Materials will help you decide. Do Not Delay – The "Organic 1 Review Materials" Assessment on Canvas is due on 5/25/2023 @9:15am. More details will be sent via Canvas Announcements.

- 2) OWLv2 Online Homework (70 pts): The primary design of the OWL system for our course is based on three basic principles: i) To ensure that you are routinely keeping up with the material with low to moderate difficulty assessments with low stakes point values. ii) Weekly and multi-weekly assessments will be due to discourage binge watching the Lecture Topic Presentations (LTPs) and to incentivize that learning the material is more easily integrated in smaller, more manageable topics. Binge watching a whole season of *Breaking Bad* in a weekend is entertainment. The material of this course requires serious thought while learning how to integrate it with past information. *Learning without thinking is useless*. *Thinking without learning is dangerous*. iii) To give students who demonstrate significant effort a path to receiving a minimal grade to pass this class and move on to the next stage. This is NOT a guarantee but as it turns out in Fall 2022, not a single student was unable to pass the class with a minimum grade of "C" that earned at least 70% of the OWL credit. In most situations, you will be provided 3 attempts at a particular OWL topic. So, with proper preparation, effort, and effective "attempts" management; the OWL portion of the course should not only allow you to learn from your mistakes, but it invariably should improve your final grade in the course. So often in life, the hard work we apply toward the pursuit of our goals is unrewarded. OWL is like doing push-ups. You properly put in the time you will get the results.
- 3) Pacing Checkpoints (45 pts): As stated earlier, to ensure that you are maintaining the proper pacing that the course demands, I have prepared a *Weekly LTP Pacing Guide* which can be found on our Canvas homepage. To further enhance this promoted outcome, there will be periodic **Pacing Checkpoints** that will focus on the cumulative and current aspects of the course based on the timing of the **LTP Pacing Guide**. Review the **LTP Pacing Guide** for dates and times.
- **4) Exams:** Progress/Assembly Exams will be delivered "in-person" on the following dates below. Room locations will be announced via Canvas. Remote/Honorlock examinations will NOT be provided under any circumstance. This is the official stance of the CLAS and the University of Florida.

Any non-university sanctioned scheduling conflicts must be resolved by the student and the second party. Again, special exam scheduling due to work or other obligations is not the responsibility of the instructor. You must make the appropriate arrangements. All exams are scheduled for 90 minutes and will be administered via Canvas using LockDown Browser. If you do not own a portable device (laptop or tablet only) that supports LockDown Browser then you will need to contact your instructor immediately so that arrangements can be made for you to take the exam at an alternate testing location.

It is possible for you to earn up to 100 points for each exam. All assessments will be cumulative, but the emphasis (60-70%) of each assessment will be focused on unevaluated ("new") material and 30-40% will be considered foundational ("old") material. All language courses build on a solid foundation of fluency. Organic Chemistry is no different.

Exam #1: Tuesday, June 20th (7:00pm – 8:30pm) Exam #2: Tuesday, August 8th (7:00pm – 8:30pm)

Considerations for scheduling conflicts (religious holidays, higher ranking assembly exams, and university sponsored events) will be made but must be presented to the instructor 5 days prior to the scheduled assessment.

Attention: DRC Students. If you receive DRC accommodations, it is the responsibility of the student to register for an ATR and adhere to the DRC's deadlines if they wish to receive their time accommodation for examinations.

Exam Absences: These will be handled in accordance with official UF academic regulations. For more information, see https://catalog.ufl.edu/UGRD/academic-regulations/. Please read below for further clarification for the most common situations:

- (1) Conflicts with other events: Acceptable reasons to miss a scheduled exam include conflicting evening exams in courses with higher course numbers, religious holidays, military obligations, special curricular requirements (e.g., attending professional conferences), or participation in official UF sanctioned activities such as athletic competitions, etc. For more information on such absences see the official UF Policy at https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/#absencestext). If you must be absent for an exam due to a documented and approved conflict known in advance, you must e-mail your instructor the relevant documentation at least one week prior to the scheduled exam and an early conflict exam will be scheduled for you.
- (2) Missing an exam due to an emergency or sudden illness: If you are absent for an exam due to an unpredicted documented medical reason or family emergency, YOU MUST contact the instructor within 24 hours of the missed assessment, and have your excuse verified by the Dean of Students Office (DSO). Your instructor will follow UF academic regulations in evaluating the notification and/or documentation received by you and by the DSO on your behalf. Once DSO confirmation is received, your instructor will then reach out to you to schedule a make-up. If your documentation is deemed insufficient to excuse your absence, you will receive a zero for the missed assessment.

Grading: The final grade will be determined based on a possible 345 points. The points will be broken down into the following categories:

2 Progress Exams - 200 points (100 each)

Organic 1 Review Materials Assessment - 30 points OWLv2 Online Homework - 70 points Pacing Checkpoints - 45 points

Total Points - 345 points

The overwhelming majority of the students that are enrolled in this course will be taking BCH 4024 next semester. So many of the concepts that form the foundation of our course will be littered throughout that course. To better assist you in this transition, not only will we have computer-based assessments, as they do in BCH 4024, but we will also use a similar grading scale. Your course grade will be based on the final grading distribution curve described below. **Note:** The distribution will be determined by the total number of students that take at least the midterm exam. *Bottom line:* If students drop, it will not impact this course grade distribution. Letter grades will be assigned based on the grading scale below:

Grading Scale

A: top 15% B+: top 22.6% to 30% C+: top 57.6% to 65.0% A-:top 15.1% to 22.5% B: top 31.0% to 50.0% C: down to 172.5 pts B-: top 50.1% to 57.5% C- to E: to be determined.

All students tied at a percentile cutoff will be awarded the higher letter grade.

PHILOSOPHY

Attendance: This course is not an attendance-based course but your success in this class will most certainly be determined by your level of effort and discipline. Having said that, time spent is NOT an accomplishment. Simply spending a large amount of time on a subject will not make you an expert and it will not provide you the confidence to perform well on assessments. To be successful, the time you spend must be planned and properly executed to generate maximum performance with minimal effort. I seriously doubt there is a single student in this course that is looking to spend one more minute on this material than is necessary to achieve the outcome they desire. The only exception to that should be if you are a chemistry major looking to one day pursue a career in Organic Chemistry. In the COVID semester of Spring 2021, I had over 950 students in my Organic 2 course, and only one student proclaimed that to be their plan. I wonder what the number will be this semester? Many semesters the answer to that question is zero. However, this course is so much more than just another "weed-out" class that stands in the way of your goal. It is a course that forces you to ask serious questions about yourself. Where do I want to go? What do I want to be? What am I willing to do? What am I willing to sacrifice? How bad do I want it? My greatest hope for each of you will be that you can confidently answer these questions when our course comes to an end. To leave a course better off than when you arrived. That should be the goal for any course. Much more so than, "What is more basic, a methyl Grignard or sodium acetylide?"

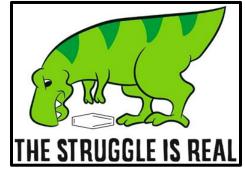
The key to success in this class is to approach it the way it should be treated – like a language course. Languages are not memorized - they are practiced daily in situational based scenarios. Think of it like learning how to drive a car. If you want to learn how to drive a car, then you do it by....driving a car. I seriously doubt that any of you made a stack of note cards on how to back out of the driveway. Organic Chemistry is alive and dynamic so studying with static, lifeless materials does not make a lot of sense and it will limit your abilities to move forward and deal with more complex situations (kind of like knowing how to drive on a slick road after a summer shower). Organic 1 taught you the basics of this language but it was limited in the depth of content to what you could problem solve or communicate. In most cases, only a single path to a solution was possible. This semester, like a language, you will see there are a multitude of ways of "getting the point across." This is why it is so important that you deal with the material a little bit at a time, but rarely should there be a day that you do not deal with it at all. Let that become your mantra – A little bit - All the time. Short, super-concentrated, uninterrupted bursts multiple times per day would be ideal. The Lecture Topic Presentations (LTPs) will be presented in this manner.

A traditional face to face (F2F) lecture during a full-length semester would be 50 minutes, 3 times a week (150 minutes per week) over the course of 16 weeks. Personally, I think this is a ridiculous way to learn anything, especially something that requires the amount of intense focus that this subject demands. The silver lining of COVID-19 was that it provided educators an opportunity to change the game. A game that desperately needed some new, updated rules. The game plan this semester is to provide you the lecture content that you will need, with LTPs that average less than 30 minutes in length. To ensure that you are maintaining the proper pacing that the course demands, I have prepared a **Weekly LTP Pacing Guide** which can be found on our Canvas homepage. To further enhance this promoted outcome, there will be periodic **Pacing Checkpoints** that will focus on cumulative and current aspects of the course based on the timing of the **LTP Pacing Guide**. Viewing and supplementing a shorter LTP everyday (M-F) should promote an improved cumulative buildup of knowledge compared to larger blocks of time in fewer days. Here is where your discipline becomes so very important. Binge watching to catch up is great for a Netflix series, however it can be counterproductive for learning a language like Organic Chemistry.

As far as the total time commitment to watching LTPs, there will be approximately 1700 minutes of video to be presented this semester, whereas a live lecture course would normally meet for more than 2200 minutes. Please, do not consider this time savings and yell "Woo Hoo!" like Homer Simpson. Consider it an opportunity to spend more time on what is critical in being successful in this class....organization, integration, and practice. If you want your stress level to be lessened during examinations, then your confidence level needs to be riding high. Use this "freed-up" time wisely.

Doing Problems: "I must have studied 50 hours and not a single thing on the test is what I studied. I understand what you are saying in lecture, I do ALL of the problems, but why did I get a 52 on the exam?" These statements and this question are as frustrating for me to hear and answer as it is for you to say and ask. My best advice to you is to work as many problems as YOU can. Honestly work them - write them out on paper, balance equations, show lone pairs, draw arrows, identify non-zero formal charges, etc. Don't turn to the solutions manual at the first moment of struggle. The struggle is real, and the struggle is

essential to make the mental connections required to be successful. Successful diagnostics is born out of identifying pattern recognition. Don't deny yourself this opportunity by simply turning to an answer. Answers are irrelevant without a logical, diagnostic process. Relying on the solutions manual or watching someone on YouTube can be a monumental mistake. Maybe this will sound familiar..."Let me just see how they did it.... Hmmm....Yep, that's what I thought the answer was supposed to be. Next question...." Before you know it, you have convinced yourself that you did the problem. Even worse, that you understand the problem. Unfortunately, when the exam comes along, you don't know where to begin. Suddenly you feel the stress of the exam because you are not confident in your preparation. This is not a scare-tactic, but it will become a reality if you do not spend the time developing a reliable problem-solving process.



This is not a course where your performance is determined by your ability to regurgitate facts or figures. To be successful in this class, you must be fluent enough in the language of Organic Chemistry to diagnose the problem, determine the best course of action, and apply what you have learned to new situations. The best way to acquire this skill is to work a lot of problems. The more problems YOU attempt, the more YOU will learn. It is that simple. Knowledge Comes from the Learning. Watching me, teaching assistants, YouTube videos or paid off-campus services solve problems will not acquire a skill for YOU any more than watching Caeleb Dressel work out will make you a better swimmer – Go Gators! If YOU are not the one getting frustrated, then YOU are not the one who will do well. If YOU are not the one exhausted from doing more problems in a single subject than you have ever done in your life....then YOU will be the one wondering "What happened?" after an exam.

"So how many problems should I attempt from each chapter?" There are two basic philosophies in practicing anything to acquire great skill (physical or mental). Some people practice until they get it right, and some practice until they CAN'T get it wrong. Which group do you think is the most successful? Answer this question and you will be well on your way to knowing how many problems to attempt. Having said that, each LTP will have Pertinent Practice Problems to reinforce the presented material and there will be select problems from the Textbook that are available on our Canvas site (Textbook Problems Page) to give you the practice in developing the necessary pattern recognition skills to be successful.

Bonuses: Your instructor reserves the right to award bonuses to any item that appears in our Canvas gradebook (required or practice) without prior announcement. So, pay particular attention to items with Canvas deadlines. The only exception will be the Classroom Meeting "Not Graded" assessments. These assessments will NEVER be used to change your overall percentage in the course.

FINAL NOTE:

If you did not know how to swim and you suddenly found yourself overboard you would scream for help. You would not worry how people would think of you and the fact that you could not swim. If you feel like the waves of Organic Chemistry are beginning to crash around you, come and get help before it is too late. *Getting help is not a sign of weakness...it is a sign of strength*. Better yet, seek out guidance before you need the help so that bad habits do not set in. It is rare in life that something FREE is better than paying a price, but here are some FREE options that truly are superior.

FREE Help:

- 1. **Dr. J's Office Hours:** Being able to have your questions answered is an important step in the learning process. Not having them answered or moving on without real understanding can undermine your efforts and waste valuable time. I will be able to assist you this semester beyond just our Classroom Meeting times through "in-person" office hours (TBA) and by monitoring our course's Online Discussion Board (see Canvas Homepage). With literally hundreds and hundreds of students registered this semester, using the Discussion Board (DB) can be one of the most effective ways to answer questions and keep them organized for all students to view. The DB provides a platform where a greater number of questions can be asked, organized and be permanently available for later review. The DB also provides an opportunity for students to read commonly asked questions and follow my responses without the redundancy which can occur during "in-person" office hours. Further, there will be several lecture-based questions, textbook alterations, and general student inquiries that will be asked throughout the semester, and the Discussion Board will be the place to find (or post) the answers.
- 2. **Dr. J's UGTAs:** It has been my mission for more than 10 years to make sure that no student in my class should have to spend an extra dime to be successful in my course. For the past 8 years I have worked with my team of UGTAs in conjunction with the UF Teaching Center to make this dream closer to a reality. This semester I will have more than 20 undergraduate students who have already taken my Organic 2 course. Some have taken my Organic 1 course, and some have not. Bottom line: They know what it takes to be successful, no matter the background. They will be providing UGTA Discussion sessions throughout the week but to attend these sessions <u>you must sign up</u>. This is not a required activity but attending a session once a week (or more) can really improve your standing in the course (See Student Habit Survey (Spring 2021). In my opinion, these UGTAs are a collection of students that are the best that this university has to offer, they are all yours, and they are FREE. There are plenty of opportunists out there that will tell you otherwise but only these UGTAs have been through this process, for our course. I trust them so should you. The UGTA Discussion sessions will be available "in-person" or via Zoom so you can choose which method suits you best. I will provide more information in the coming days about how to sign up for a UGTA but for now, I will leave you with this student testimonial:

I had *** as my UGTA and his group chat and review sessions helped me in the class. I am also very grateful for the practice exams and videos that the UGTAs released before each exam. This was my second time taking Orgo 2 and last Semester I finished with a 33% in the class using ***** ****. This Semester I tried even harder and was able to pass without needing outside resources, and I believe it was partially due to the resources the UGTAs provided.

3. UF Teaching Center

UF Teaching Center - Make an Appointment for an online or in-person tutor - FREE! Stay tuned for details on their upcoming schedule.

Standard Syllabus Statements

Listed below are standard syllabus statements that meet the College of Liberal Arts and Sciences and UF requirements for undergraduate and graduate courses. All of these topics must be included in the syllabus. These cover the minimum requirements. More details can be added at the instructor's discretion.

Academic Honesty

As a student at the University of Florida, you have committed yourself to uphold the Honor Code, which includes the following pledge: "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity." You are expected to exhibit behavior consistent with this commitment to the UF academic community, and on all work submitted for credit at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment."

It is assumed that you will complete all work independently in each course unless the instructor provides explicit permission for you to collaborate on course tasks (e.g., assignments, papers, quizzes, exams). Furthermore, as part of your obligation to uphold the Honor Code, you should report any condition that facilitates academic misconduct to appropriate personnel. It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated. Violations will be reported to the Dean of Students Office for consideration of disciplinary action. For more information regarding the Student Honor Code, please see: https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/

Services for Students with Disabilities

The Disability Resource Center coordinates the needed accommodations of students with disabilities. This includes registering disabilities, recommending academic accommodations within the classroom, accessing special adaptive computer equipment, providing interpretation services and mediating faculty-student disability related issues. Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester. Please contact the DRC in Reid Hall at 352-392-8565 or go to their website at: www.dso.ufl.edu/drc/

Campus Helping Resources

Students experiencing crises or personal problems that interfere with their general well-being are encouraged to utilize the university's counseling resources. The Counseling & Wellness Center provides confidential counseling services at no cost for currently enrolled students. Resources are available on campus for students having personal problems or lacking clear career or academic goals, which interfere with their academic performance. Your well-being is important to the University of Florida. The U Matter, We Care initiative is committed to creating a culture of care on our campus by encouraging members of our community to look out for one another and to reach out for help if a member of our community is in need. If you or a friend is in distress, please contact umatter@ufl.edu so that the U Matter, We Care Team can reach out to the student in distress. A nighttime and weekend crisis counselor is available by phone at 352-392-1575. The U Matter, We Care Team can help connect students to the many other helping resources available including, but not limited to, Victim Advocates, Housing staff, and the Counseling and Wellness Center. Please remember that asking for help is a sign of strength. In case of emergency, call 9-1-1. Campus Helping Resources

University Counseling & Wellness Center, 3190 Radio Road, 352-392-1575, www.counseling.ufl.edu/cwc/

Counseling Services Groups and Workshops Outreach and Consultation Self-Help Library Training Programs Community Provider Database

• Career Resource Center, First Floor JWRU, 392-1601 or at: <u>www.crc.ufl.edu/</u>

Absences and Make-Up Work

Requirements for class attendance and make-up exams, assignments and other work are consistent with university policies and can be found at: https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx

Online Student Course Evaluations

Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at https://ufl.bluera.com/ufl/. Evaluations are typically open during the last two or three weeks of the semester, but it will be announced to students when the evaluation period opens. Summaries of course evaluation results are available to students at https://gatorevals.aa.ufl.edu/public-results/.

Grades and Grade Points

For information on current UF policies for assigning grade points, see https://www.advising.ufl.edu/resources/gpa-calculator/

Software Use:

All faculty, staff and students of the university are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against university policies and rules, disciplinary action will be taken as appropriate.