



CHM 2211L Syllabus– Organic Chemistry II Lab.

Spring 2016

College of Arts & Sciences

Department of Chemistry & Physics

Time: See schedule

Dates: Every-other Tuesday. See schedule

Location: BHG-211

Instructor: Dr. Daniel Paull, Assistant Professor of Organic Chemistry

Email: dpaul@fgcu.edu

Office: MH 192

Office Hours: (check Canvas home-page for updates)

Monday 1:00—4:00 pm

Tuesday 12:00—1:45 pm

THINGS TO KNOW BEFORE THE FIRST DAY

1. Buy your goggles and laboratory notebook ASAP - the bookstore tends to run out and this will not be an excuse. see syllabus for details on what to buy
2. Sign the safety contract on canvas.
3. Bring a **print-out** of laboratory the experiment of the day (digital devices will get chemicals on them, and we're using much more nasty chemicals than we ever have before)
4. THE FIRST QUIZ, on day 1 at minute 1, will be entirely focused on safety issues. Make sure to study the safety section below, as well as the safety section in your lab manual. (See below for future quiz guidelines) ***quizzes will only be held at the very beginning of lab***
5. You must have a laboratory notebook. [THIS](#) is an acceptable lab book and [THIS](#) is the cheapest acceptable one. The bookstore should have another, see syllabus for description of acceptable notebook. Yours from last semester may not be acceptable.
6. You must complete the pre-lab write-up in your notebook, prior to lab. I will check for completion and if it's not complete you will receive a zero.
7. You must come in the **proper attire**. This includes bringing GOGGLES (I highly recommend [THESE](#) goggles). See rules in syllabus. No exceptions. Yes it's Florida, but you may be turned away for any skin showing below the neck, even if it's only a bit between pants and shoes.

8. Be **on time**. The class starts exactly on Time; quiz is collected at T+5 mins with no exceptions.

LAB SAFETY GUIDELINES

You will be exposed to hazardous chemicals in this class. Safety issues will appear in the quizzes. Personal protective equipment is necessary to protect your body. You will **not be permitted** to perform the experiment if any of the following guidelines are not met. If you violate any of the following guidelines, you may be asked to leave the lab. All missed work will receive zero credit. If a student is dismissed for safety violations, he/she will be awarded a zero for the day's work. If he/she is dismissed for the second time, he/she will receive an automatic "F" for the course and will be reported to Dean of Students as a "disruptive student". Students may be dismissed from the laboratory for failure to comply with stated safety regulations.

1. Sign the safety contract. You will NOT be able to participate in any lab without first submitting a signed safety contract.
2. Improper conduct or horseplay that may endanger others and will not be tolerated.
3. **LOOK BEFORE YOU STEP!!** Many accidents can be avoided simply by paying extra attention.
4. You bring goggles and we provide gloves; these must be worn at **all** times when dealing with chemicals or if anyone else is using chemicals, or if you have a reaction going. You may sit at the desk side of the lab without goggles on.
5. If you have any safety questions or need help, just ask your instructor **NOT** other students.
6. Shoes that cover the entire foot are required at all times. Absolutely no exceptions will be made to this guideline. Warnings will not be issued.
 - a. NO OPEN TOE SHOES (*i.e.*, no sandals, flip-flops, or shoes with holes in the toes such as crocs)
 - b. NO SHORTS OR SKIRTS (your entire legs must be covered)
 - c. NO MIDRIF BARING TOPS (your entire torso must be covered at all times, even if you raise your arms to the sky)
 - d. No skin showing between your pants and shoes!
7. No musical or other entertainment devices may be used in chemistry lab at any time.
8. Cell phones are not permitted in lab and must be silenced and placed in your bag before you enter lab. If you have a situation which you feel warrants leaving it on, speak with me personally.
9. Using tablets or laptops at the lab bench, even for lab related uses is NOT permitted. These must be kept on the desk half of the lab.

If you are not equipped appropriately and/or heed all safety warnings then you will not be allowed to continue the experiment and will be excused from that lab session (resulting in an absence).

GRADED MATERIALS - all graded materials are **INDIVIDUAL**, even though you have a lab partner for conducting the experiment.

Pre-lab quizzes (50 pts):

Quizzes will be given every lab day at the beginning of the lab period and will be collected 5 minutes later (*this includes the first class period!*). You will be quizzed on each lab procedure and any theory that I think you have to know in order to successfully run the experiment. Always read the procedure *with curiosity*. The quizzes will be on **specifics about the experiment procedure, and possibly safety**. Reading the procedure thoroughly and *inquisitively* and completing the pre-lab write-up will help to study for these quizzes. Always think about the why.

Prelab and notebook (see details file)

Written part (see details in assignment)

Each lab has a different required written part. See the directions given in the assignment details

Laboratory Conduct, Participation, and Technique:

Your conduct and level of engagement are very important in lab. In particular, **safety** is very much in question when students are not paying attention to what they are doing or to their surroundings. Accidents are almost always preventable by checking everything you do, looking where you are about to move before you move there, and generally taking care. You will be assessed in these areas on each lab day. As you are expected to receive full credit in this area, there is no standard point value associated with this section and negative points will be earned whenever the instructor thinks they are deserved. This also includes being respectful of everyone in the lab, where chronic disrespect will result in a fail grade for the course and possibly more severe disciplinary action.

More rules:

- Even though you will perform the experiments with a partner(s), all lab reports are to be written **INDIVIDUALLY**. All lab reports are processed through turnitin for plagiarism and the overlap report will be individually assessed and might result in a zero, or in extreme cases, an F in the course and a citation with Academic Affairs.
- Reports will be graded upon how well they are written (scientific language and content), organized (overall appearance), and content.
- I will not grade you on your yield.
- All of the reaction equations, mechanism and chemical structures **must be drawn** in the notebook.
- For any calculations, you must show all your work to receive credit.

Lateness:

- You cannot be late on anything without severe penalty!!
- There are no make-up quizzes. If you are 5 minutes late, you missed the quiz.
- There are no make-up lab sessions. If you miss an experiment with plenty of advanced notice, it is sometimes possible that you can join another lab to complete the experiment. If this is not possible, then you cannot make it up. You will be able to turn in the written assignment, but, for obvious reasons, your notebook must receive no credit. If you have a super legit excuse for

missing, and arrange it with me in advance, then I might be able to work something else out if you notify me in advance. If no advance notice is given, no concessions will be made.

- If you miss 2 experiments, you will fail the course.

Zero-tolerance late policy:

- You cannot submit anything even 1 second late
- Deadlines throughout the course are **absolute**. Late material, even a single second late will receive an automatic zero. Computer issues, format problems, and anything else that you think is a reasonable excuse, even hospitalization, doesn't get you out of these requirements. The only exception is campus-wide complete Canvas failure for more than 2 of the final 3 hours prior to the deadline.
- However, you do have **one emergency lifeline** – you may miss the exact deadline only once this semester (by up to 1 week). Beyond your first offense, 1 single second late will result in a zero. If you do miss any deadline, it will be counted as this one lifeline unless you immediately delete the assignment.
- This policy is absolute in the hopes of teaching you responsibility. In any job you would be fired or at least in the dog-house for missing a deadline, hence the term “dead-line”. So take this seriously. It's easy – just pretend the deadline is earlier than it states! Especially for your first try. Dry runs are great! I won't look at anything but your last submission.
- Note that “it didn't upload” excuses will NOT be accepted, nor will any other excuse. It is your responsibility to ensure, and verify afterward, that your upload was properly completed. If something went wrong, it is probably because you tried to upload the wrong file format.

Final grades:

Final grades in the course will be based on the following assignment types and their respective weights. The course grades will be determined in the following manner:

A: 100-95%;

A-: 94.99-89%;

B+: 88.99-84%;

B: 83.99-79%;

C+: 78.99-76%;

C: 75.99-73%;

D: 72.99-60%; F: 59.99% and below. All of your grades will be available on Canvas for you to view – any errors must be reported immediately.

The point totals breakdown thus:

Assignment type:	Points
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Pre-lab Quizzes (lowest <i>non-zero</i> score is dropped)	300 pts
Notebook (including prelab grade, 100/ea)	700 pts
Written Assignments (various)	350 pts
Final Paper	200 pts
TOTAL (subject to change)	1550

ATTENDANCE POLICY

There are only seven experiments during the semester it is imperative that you be present during every lab period. **There are no make-ups for any experiment.**

- Pre-lab quizzes will be assigned at the beginning of class. If you are late for class you will not be given additional time to complete the quiz.
- If you miss one lab you will receive no credit for that lab and will not be allowed to turn in the relevant report.
- If you miss **two** labs, you will receive an automatic “F” for the course with no exceptions.

Tardiness: Students arriving after the experiment discussion by the instructor may or may not be permitted to conduct the experiments. This depends on the situation and the experiment. This generally means that arriving 15 minutes late will REALLY hurt your grade. Students arriving slightly late will miss part of the quiz time with no make-up.

CONTACT POLICY – I require a *formal / professional message* or I will not respond

- Address me as Dr. Paull, and use impeccable grammar, structure, salutations, and signature
- If it looks like a tweet or txt type messages make me mad and *might result in negative points*
- If it's not formal and professional, I won't read it and won't respond
- **If you message me through Canvas, you must copy any previous communication into the message** – it doesn't do that automatically. This is one reason you should use email instead!

MATERIALS NEEDED

- Lab manuals (Available to download on Canvas). Must have print-out of the day's lab!!
- Laboratory Notebook: any official laboratory notebook. I recommend [THIS](#), and [this](#) or similar is also acceptable. Your notebook does not need to have carbon-copy pages but must be made to be a lab notebook. A good gauge is 1. Having page numbers, 2. No perforated or hole-punched pages, 3. Permanent binding, 4. Bonus if it says 'lab' somewhere on it.
- Safety glasses/goggles with splash protection. I highly recommend [THESE](#) goggles. If you buy cheaper or from the bookstore, you'll be disappointed. NOTE that I will allow lesser safety glasses in Orgo I lab (like [these glasses](#), which are **unacceptable for Orgo II**), but in orgo II, we will be working with much more dangerous chemicals and you must have the full splash protection and full goggles. If you are not continuing to Orgo II, then you will prefer [these glasses](#). If you do buy elsewhere, and you are getting Orgo II ready goggles, they must be OSHA splash rated. This means that the entire bottom seals to your face and the vents are only at the top.

COURSE DESCRIPTION

CHM 2210L, a one credit-hour course, is known as Organic Chemistry I Laboratory. It is offered by the College of Arts & Sciences, intended for science majors. Organic Chemistry I Lecture (CHM 2210) is a co-requisite of this course. The course is on the FGCU's CANVAS website. You can access and download this syllabus and posted lab materials at [HTTP://elearning.fgcu.edu](http://elearning.fgcu.edu).

The experiments continue to develop expertise with organic chemistry techniques and familiarity with equipment and glassware commonly used in organic chemistry. Some of the experiments illustrate concepts discussed in the lecture class such as aromatic substitution reactions and carbonyl chemistry.

PREREQUISITE

CHM 1046 with a minimum grade of C and CHM 1046L with a minimum grade of C or CHM 1046C with a minimum grade of C.

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.

- Perform and justify the separation techniques used in purifying organic compounds.
- Determine the melting point of a solid organic compound
- Obtain the IR and NMR spectra for liquid organic compounds.
- Perform microscale organic syntheses that involve reflux, distillation, and vacuum filtration techniques.
- Calculate the percent yield/percent recovery obtained for various organic syntheses and separation experiments.

HONOR CODE

Any incident of cheating will result in a "0" grade for that assignment and possibly an "F" grade for the entire course. This includes plagiarism. In addition, you will be referred to the Judicial Department of the Dean of Students' Office for violation of the Student Code of Conduct. 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>

Although benchwork is often completed in groups, Formal Written Reports are individual.

SUPPLEMENTAL INSTRUCTION

It is highly 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 see me or contact the Office of Adaptive Services. The Office of Adaptive Services is located in the Wellness Building. The phone number is 239-590-7956 or Video Phone (VP) 239-243-9453. In addition to classroom and campus accommodations, individuals with disabilities are encouraged to create their personal emergency evacuation plan and FGCU is committed to providing information on emergency notification procedures. You can find information on the emergency exits and Areas of Rescue Assistance for each building, as well as other emergency preparedness materials on the Environmental Health and Safety and University Police Department websites. If you will need assistance in the event of an emergency due to a disability, please contact Adaptive Services for available services and information.

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 CHANGE POLICY

Adequate notification will be given if changes to this syllabus are to be made. Any alternations to this syllabus will be announced in class.

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.

CHM 2210L – LAB SCHEDULE

See canvas for due dates. Quiz dates mark our lab dates. Reports are due at the specific time the assignment requires, and are not always