CHEMISTRY 231, Spring 2022, SECTION 02, 3 credits:
(This syllabus is subject to change.)

Instructor: Rick Heldrich, Ph.D.  Office: SSMB 108
Research Lab: SSMB 123 & SSMB 343
Office Hours: to be determined; by individual appointment on zoom; or
by email: (heldrichr@cofc.edu)
Teaching Schedule:
TR: 231 02; CRN 21132; 9:25-10:40 am; SSMB 129
T: 231L 02; CRN 20159; 1:40 - 4:40 pm; SSMB 109

Drop/Add: Before the drop/add deadline on Tuesday, January 18th, you should decide
whether the course plan on this syllabus will work for you.

Office Hours: All office hours will be conducted using zoom (link to be shared upon request for
individual office hour meetings). Office hours may be made for an individual or a group by
appointment. I will hold at least one mass zoom office hour each week, schedule to be posted on
OAKS. Please see my teaching schedule to find out when I am likely to be available during the
week between 8 am and 5 pm. I will generally not be available on any day before 8 am or after 5
pm, nor will I be available after 5 pm the day before a test or exam. During the week I will try to
respond to all emails within 3 hours, but hopefully much sooner than that. On the weekends I
will always try to respond within a day to any emails, generally checking for emails each
morning and evening.

Final Exam: The Final Exam will be a timed, nationally standardized American Chemical
Society examination for the first semester. Material from the laboratory course may also be
included. Not taking the final exam will result in the grade of "F" in the course. Requests for an
alternate final exam time must be processed through the Office of Undergraduate Studies no later
than 5 p.m. on the last day of class.

Learning Materials:
to the textbook can be online, as a pdf, or in print (see complete listing on OAKS).
Purchase and use of associated online material designed by the publisher for use of this
book is optional, and no part of course grades will be intentionally based on the use of
that material.
• (required): OAKS. We will make extensive use of the College of Charleston Learning
Management System, nick-named OAKS.
• (required): reliable high speed internet access and a personal computer with audio and
video capability that can be used with Respondus (e.g., not a Chromebook).
• (optional and recommended): Clutch Prep Video Program: used for video-based
supplemental learning and preparation for the final exam, no part of course grades will be
intentionally based on the use of that material.
• (optional and highly recommended): ChemDraw, this is a Free download (http://chemistry.cofc.edu/current-students/resources/index.php) with CofC email.
• (recommended, see Clutchprep as alternative): ACS Organic Chemistry Study Guide http://shopping.na1.netsuite.com/s.nl/c.3773982/sc.11/category.191/ 
• (highly recommended see ChemDraw as free alternative): Physical Molecular Model set

Departmental Student Learning Outcomes for CHEM 231:
• Demonstrate basic communication skills within organic chemistry for example structure, nomenclature, mechanisms, reaction schemes
• Define and use fundamental concepts associated with physical organic chemistry
• Use foundational skills of organic reactions to predict organic reaction outcomes

Co- Pre-requisite Policy: Chemistry112/112L are prerequisites of this course, and chemistry 231L is a co-requisite for Chemistry 231. If you are repeating the lecture or lab and do not need to repeat the co-requisite course you must remedy this with the department chair during the Drop/Add period.

Attendance Policy: Attendance is required. Unless in class instruction is suspended, all lectures, tests and the final examination will be in person. If the College of Charleston campus closes and members of the community are evacuated, you are responsible for taking course materials with you and we will hold synchronous zoom meetings in place of in person meetings. If you are in quarantine or ill, contact the instructor by email BEFORE the scheduled class or test to set up for synchronous on-line participation. An excused rescheduling of any graded assignment will require my approval in advance by email. Quizzes will not be rescheduled.

Attendance Verification: Only students officially registered (graded or auditing) for this course may attend class. During the week following the drop/add deadline, I will verify student enrollments in this course. Any student appearing on the class roll but determined not to have attended the class even once will be removed.

Zoom Protocol: In the event that lectures are recorded by Zoom (to accommodate pre-authorized attendance by Zoom or the need for conversion to on-line instruction) Zoom sessions will be recorded (video and audio). By attending and remaining in this class, the student consents to being recorded. Any recorded sessions are for instructional use only and may not be shared with anyone who is not enrolled in the class. Enter the zoom site for our class using the access provided through our course OAKS site. When attending by Zoom, turn your video on so everyone in the class can see who you are, and leave your video feed on during the entire class session. The default setting for your audio input should be off, but you should be prepared to turn your audio feed on or off as needed to ask questions or to respond to questions asked of you.

Grade Scale:
A, 100-93; A-, 92-90; B+, 89-87; B, 86-83; B-, 82-80; C+, 79-77;
C, 76-73; C-, 72-70; D+, 69-67; D, 66-63; D-, 62-60; F, <60

Graded Work: There will be unannounced quizzes, four tests and a final examination. The evaluations will be cumulative and timed. Only work that is submitted on time will be graded. The evaluations will be offered during the scheduled class period. There will be no make-up
evaluations. I reserve the right to verify and adjust any grades by oral examinations conducted on Zoom as needed.

If an evaluation is taken online (see attendance policy) it will be timed and all parts of the test or exam must be completed concurrent to the scheduled in person class period. Before taking a test online you must find a way to scan or take a photo of your work and quickly upload it to OAKS. I recommend Adobe Scan or a similar program. Please familiarize yourself with this app or a similar app before using it for an exam: https://www.youtube.com/watch?v=HE3IRDblu8U&feature=emb_logo

Grades of 0 will be recorded for all missed evaluations in this course. For remote work, local internet access issues will not be a justified cause for absence. Systematic internet failure (for example the CofC server, loss of city-wide service from a major provider) will be considered if supported by appropriate documentation. For these reasons, you must have reliable internet access and a computer equipped with a web camera, microphone, and reliable Internet access. Access to a printer/scanner is highly recommended.

Old tests posted on OAKS are probably the best representation of problems you might see when taking tests. Some test problems on the tests are likely to be taken from problems in the required text for the course, quizzes, and even old tests.

ClutchPrep: ClutchPrep (https://www.clutchprep.com) makes textbook-specific video-based concept and practice content for this course. There is an additional cost to you for using Clutch Prep, but students who actively used Clutch Prep in my classes over the past two years reported a high level of satisfaction using ClutchPrep with increased confidence going into the tests.

Accommodations Policy: Most of the evaluations for this course will be timed. This College abides by section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act. If you have a documented disability that may have some impact on your work in this class and for which you may require accommodations, such as extra time on evaluations, please see or contact an administrator at the Center of Disability Services/SNAP, 843.953.1431 and have them contact me so that such accommodation may be arranged. Any accommodation must be approved in advance by our SNAP office.

Evaluation Policy: Hopefully the evaluation grades and final course grades are a measure of what each person knows, not who each person knows. No one should have to worry that anyone is getting unauthorized help on graded work. Whenever you submit your work for evaluation you must be truthful to yourself, your peers and to me that what you are submitting represents your knowledge. For this reason, during any evaluation in this course, the use of Chegg®, or Course Hero, or a personal tutor, the College CSL, or sharing/copying/stealing from another person is strictly prohibited. This applies to quizzes, tests, and the final examination. It should go without saying, but it apparently must be said, that the standards of the College of Charleston Student Honor Code and Code of Conduct apply to this course. It is your honor code, not mine. We will also abide by The Departmental Policy on Scientific Integrity, as posted on OAKS. The following information (see below), pulled from the College of Charleston policy document for required syllabus content obviously applies to this course.
“Lying, cheating, attempted cheating, and plagiarism are violations of our Honor Code that, when suspected, are investigated. Each incident will be examined to determine the degree of deception involved.

Incidents where the instructor determines the student’s actions are related more to misunderstanding and confusion will be handled by the instructor. The instructor designs an intervention or assigns a grade reduction to help prevent the student from repeating the error. The response is recorded on a form and signed both by the instructor and the student. It is forwarded to the Office of the Dean of Students and placed in the student’s file.

Cases of suspected academic dishonesty will be reported directly by the instructor and/or others having knowledge of the incident to the Dean of Students. A student found responsible by the Honor Board for academic dishonesty will receive a XXF in the course, indicating failure of the course due to academic dishonesty. This status indicator will appear on the student’s transcript for two years after which the student may petition for the XX to be expunged. The F is permanent.

Students can find the complete Honor Code and all related processes in the Student Handbook at: https://deanofstudents.cofc.edu/honor-system/studenthandbook/index.php”

**OAKS**: OAKS, including Gradebook, will be used for this course throughout the semester to provide the syllabus and class materials and grades for each assignment. Items are located under the content tabs as follows:

1. Policy documents are located under Content, then Policy.
2. Topical outlines for each chapter are found under Content, then Chapter Outlines.
3. Lecture notes will be posted under the tab Content, then Lecture Notes.
4. CHEM 231 tests (including graded tests from this semester, with answers keys when they are available) are posted under Content: Old Tests.
5. Quizzes (old and new) for CHEM 231 are posted under Content: Quizzes.
6. Spectroscopy review materials are posted under Content: Spectroscopy Review.
7. Discussion boards are posted under Communication, then Discussions. Please post questions, request topics for discussion, or respond to concerns of others as the semester progresses.
8. Supplemental handouts, are under Content: Handouts.

**Quizzes**: Quizzes will be offered only during class. The sum of your quiz grades associated with each test will be used as extra credit points for that test.

**Grade Formula**: Each test will be 18% of the course grade and the final exam will be 28% of the overall course grade. If higher, your final exam grade will replace your lowest test grade. The final exam will then be either 28% or 46% of your overall course grade.
FERPA: (see https://registrar.cofc.edu/ferpa/index.php). FERPA regulations are followed to protect your rights and privacy. To provide further privacy protection grades will not be discussed with students by email.

Tips for Success in Learning Organic Chemistry: There is no magic pill that makes learning organic chemistry easy. In this course, the tests will be designed to measure both what you have learned and what you are able to do with what you have learned. The universally successful strategy to learning introductory organic chemistry is to learn how to use the information as you are trying to learn it. This might seem impossible, after all how can you use something before you know it or learn how to use it? But let’s put it this way. When you were learning how to sit behind the wheel and drive, did you learn more about driving by reading, hearing a series of driver’s education lectures, watching someone else drive? Or, did you learn more by sitting behind the wheel and taking charge? You need to take ownership of learning the material, putting yourself in the driver’s seat. Do not assume you understand anything just because it made sense while watching, reading or listening. Prove to yourself that you understand the material by using what you read, watch or hear, as soon as possible to solve a problem. Only then you will learn if you truly grasp the idea, or if maybe you misunderstood it or its value. All introductory organic texts are designed around this principle.

This leads to an important question, how should you read an organic text book? Not like a regular book. Before each class period gloss over the parts of the text that you expect to be covered in the lecture. The goal is to get a footing on what will be presented, not to try and understand it. Look at the pictures, the section headings, any charts or graphs. Do not worry to what about what it means, but try to be prepared to follow any discussion by familiarizing yourself with new words, concepts or definitions. For a 90 minute lecture, this will take somewhere between one to two hours. After each class, and before the start of the next class period is the actual “reading/study” based on the text. Instead of reading the text like a novel, try this “reading/study” strategy. Find the first “in the chapter problem”, try to solve it, and then read the chapter text that preceded the problem. As an example, read SkillBuilder 1.1 (page 3) first and try to draw all the constitutional isomers that have the molecular formula C₃H₈O, without looking at the solution or reading the text. If you struggle doing that, then read the preceding sections of the text in Chapter 1 (pages 1-3) and go back over your lecture notes with an eye towards solving the SkillBuilder problem. If you still can’t figure out how to solve the problem, then look at the solution in the text and try to identify how the preceding text (pages 1-3) and lecture notes could have helped you to solve the problem if you had understood the text more clearly. Once you think you understand the solution to the SkillBuilder problem, then test your ability with the two subsequent in chapter problems 1.1 and 1.2 (on page 4). This should take another 1.5-2.5 hours for each 90 minutes of lecture. Save the associated end of chapter problems as review (great use of your study hours over the weekend) after you have studied all of chapter 1. And remember, the material is cumulative. If you forge ahead with “reading/study” without taking the time to understand what you are trying to learn and demonstrating to yourself that you do get it (by successfully solving the in chapter problem) you will be putting in a lot of time and effort with greatly reduced odds of success.

No one would take a driver’s license road test before they had had practiced driving; it is no different when taking a test in introductory organic chemistry. If during your practice driving in an empty parking lot you cannot pull cleanly in-between the lines of a parking spot, odds are
pretty high the results of the driver’s test will not go well. There are lots of opportunities for you
to test drive the material in introductory organic chemistry before you are evaluated by a test.
These are recommendations, listed order in priority order.

1. Each day, after every class and before the next class, work every in chapter
   problem as soon as that material has been covered.
2. Work any challenge problems presented during the lecture before the next lecture
   class.
3. After the lecture on a chapter has concluded, work problems from the end of the
   chapter in the text. If you do not have the time to do all the problems, do as many
   of each type as you can. Spend extra time on the type of problems that cause you
   the most trouble or that you are most afraid of facing on test day. Typically do
   this on the weekends, every weekend.
4. Work previous test questions that are posted on OAKS. Typically do this on the
   weekend before the test.
5. Find a study partner, each of you make up your own questions, share them with
   each other and then get together (zoom) to talk through them.
6. If you decide to use ClutchPrep, then use it to supplement your understanding of
   the material. If you perceive a difference between ClutchPrep, the text, or the
   lecture, bring it up with me to get things sorted out.

**Email:** Email is considered an official method for communication at the College of Charleston.
Official College of Charleston email accounts are automatically assigned to all students upon
acceptance at the College. Students are expected to check their College of Charleston official
email on a frequent and consistent basis in order to remain informed of College related
communications. Checking email on a daily basis is recommended.

**Class Climate & Netiquette:** As stated in the Student Handbook: “a college classroom requires
a higher level of courtesy than many people exercise in ordinary public space. Everyone in a
classroom is there for the purpose of learning, and no one should be able to deprive another
person of the chance to learn. Expressions of rudeness and even carelessness degrade the high
purpose of learning that should be paramount in a college classroom.” This applies equally to
the online classroom.

To maintain a respectful and supportive environment, please uphold these rules of
netiquette. Netiquette is network etiquette, the do's and don'ts of online communication.

- Be aware of how your communication may be perceived by others.
- Do not write in ALL CAPS – this is perceived as yelling.
- Cite your sources.
- Help each other.
Zoom Protocol (should Zoom become necessary)

- If joining the class lecture remotely, do so through OAKS. You are expected to join the Zoom class at least a minute before it is scheduled to begin. If you join using improper credentials and or you are put into a waiting room after the class begins, you are at risk of not being recognized and thus not be admitted to the zoom lecture during the class.
- When attending by Zoom, turn your video on so everyone in the class can see who you are.
- When attending by Zoom, turn your audio off, but prepared to turn it on to ask questions or to respond to questions asked of you.
- If Zoom is used, class sessions will be recorded (both audio and video). By attending and remaining in this class, the student consents to being recorded.
- Recorded class sessions are for instructional use only and may not be shared with anyone who is not enrolled in the class.

Technical Difficulties/FAQs: If you have questions or problems related to the course, please follow the communication procedures noted above. If you have technical problems, please contact Student Computing Support or Helpdesk using these methods:

For Student Computing Support (for questions on campus about computing): (1) 843-953-5457; (2) studentcomputingsupport@cofc.edu; (3) blogs.cofc.edu/scs

For Helpdesk (on campus IT services): (1) 843-953-3375; (2) https://it.cofc.edu/contact/index.php

For Wiley – Customer Support: (1) (800) 331 5094; (2) https://mhedu.force.com/CXG/s/

For Zoom (for individual meetings or meetings with small groups): (1) https://support.zoom.us/hc/en-us/articles/206175806-Top-Questions ; (2) https://support.zoom.us/hc/en-us

For ClutchPrep: use chat link on the ClutchPrep website: https://www.clutchprep.com/
**Schedule** *(Subject to change, no schedule changes are anticipated based on the institutional decision to switch between in-person and online instruction):*

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<td>11-Jan C1/C14-MS</td>
<td>13-Jan C1</td>
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<tr>
<td>18-Jan C1/C2</td>
<td>20-Jan C2/C14-IR</td>
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<td>25-Jan C2</td>
<td>27-Jan C3</td>
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<tr>
<td>1-Feb C3</td>
<td>3-Feb C4</td>
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<td>8-Feb Test 1</td>
<td>10-Feb C4</td>
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<th>Tuesday</th>
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<td>8-Mar Spring Break</td>
<td>10-Mar Spring Break</td>
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<td>15-Mar C15-PMR</td>
<td>17-Mar C7</td>
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<td>22-Mar C7</td>
<td>24-Mar C7/C8</td>
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<td>29-Mar C8</td>
<td>31-Mar C8</td>
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<td>5-Apr Test III</td>
<td>7-Apr C9</td>
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<td>12-Apr C9/C10</td>
<td>14-Apr C10/C11</td>
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<td>19-Apr C11</td>
<td>21-Apr Test IV</td>
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| 1-Mar C6 | 2-Mar Test II |

*Saturday, April 30
10:30 am – 12:30 pm, Final Exam, SSMB 129*