

Syllabus Spring 2018 (Tentative)

I. Basic Course Information:

- A. Instructor: Marino Resendiz
- B. Semester: Spring 2018
- C. Instructor's Office Number: SI 4145
- D. Instructor's email: email: marino.resendiz@ucdenver.edu
Phone: (303) 556-5669
- E. Science Department Phone number: (303) 556-3259 If you call this number, please leave a message with the Administrative assistant. **Student concerns with course issues**
- F. Class Meeting times: Lecture & Recitation T/H 5:00-6:50 PM
- G. Office Hours & Availability: Tuesday/Thursday 4:00 – 5:00 pm
Additional office hours may be scheduled by appointment, please email to suggest a few specific 15 minute time slots that you are available.

Email and/or Canvas is the best way to contact me, however, some chemistry questions are difficult to answer by email. I may respond by suggesting an appointment.

H. Text (required):

Organic Chemistry, Marc Loudon, ISBN: 9781936221349, Roberts and Company Publishers; 6th Edition.

Other (optional):

Pushing Electrons, Daniel P. Weeks, ISBN: 0-03-0206936, Saunders College Publishing; 3rd Edition.

The Art of Writing Reasonable Organic Reaction Mechanisms, Robert B. Grossman, Springer, ISBN: 0-387-95468-6.

Chemistry as a Second Language, David Klein, (1st and 2nd semester), ISBN-10: 111801040X | ISBN-13: 978-1118010402.

I. Grading:

| | |
|-------------------------------|-----|
| Quizzes | 200 |
| Special Assignments (× 2) | 80 |
| 2 Midterm exams (150 pts ea.) | 300 |
| Final exam (ACS) | 180 |
| <hr/> | |
| Total | 760 |

Grading: Your final course grade will be determined by the percentage of total points that you earn:

| | | | | | |
|-------|---------|----------|--------|----------|--------|
| A/A-: | 90-100% | B+/B/B-: | 80-89% | C+/C/C-: | 65-79% |
| D: | 50-64% | F: | <50% | | |

Quiz Dates: Quizzes dates will be announced throughout the course.

Exam Dates: Feb. 15 _____ April 3

Special Assignments: The assignments consist of a written report (1 page max.) that relates the material covered in class with relevant literature examples. This report is to be based on a single article from one of the following journals: Journal of Organic Chemistry, Organic Letters, Tetrahedron, European Journal of Organic Chemistry, or Synthesis. The article must have been published recently (after September 2016). The article corresponding to the first report will be assigned by the instructor while the 2nd report is to be chosen by each student. All articles must be approved by the instructor (each individual in the class must have a different article).

A sample of what all assignments should contain will be posted on Canvas and will be available for viewing throughout the semester. NONE of the components of the assignment should be done by hand, that is, ALL of the assignment should be done by each student on a computer. The format for the typed portion is: 11 font Times New Roman with ½" margins (right, left, top and bottom). The assignment must be well referenced. The paper must be written in English using proper scientific language and terminology. While the emphasis of the grade will be on content, the clarity and logic of the report will also count heavily. A sample guide will be provided to write the paper. Each student is encouraged to identify an article of their interest for its corresponding approval as soon as possible. Please follow the provided guidelines as failure to do so may result in a significant deduction of points.

Any type of plagiarism will result in 0 points for that assignment. If you have any questions/doubts on what constitutes plagiarism please ask the instructor.

Final Exam: Week of May 7-12 (to be set by AHEC). The ACS version of the Final will be used for this exam.

Homework: There will not be graded homework. Worksheets as well as assigned problems from the book will be available. Some of these assignments may be made for extra-credit upon announcement in-class and/or canvas.

Tests The topics of Organic Chemistry build upon each other and all tests are cumulative. However, the emphasis of each will be on the most recent material. There will be 2 midterm tests, each worth 150 points. It is your responsibility to attend all lectures and there will be NO MAKE-UP TESTS.

Grades: If you find an error on your grade, I encourage you to let me know. You must do so in writing. The deadline for corrections will be given the day the exam is returned (typically by the next class period from when the exam was handed out). Randomized copies of all the exams will be made – this reduces the risk that a student could change an answer and submit it for a re-grade. In the event of a *campus closure* on the date of a test, it will be given on the next scheduled class period. Failure to take a test (including the final exam) will result in a ZERO grade for that test. **I will not use email to discuss grades.**

The especial assignments as well as the quizzes will not be returned unless requested. All students are encouraged to pick all of their graded materials during office hours or by appointment.

Canvas: Canvas will be used for posting exam grades and lecture material. Please make sure that your email address on Canvas is one that you will check regularly. You are responsible for any information posted on Canvas. Some, but not all lecture material, will be posted on Canvas. You are responsible for all material covered in this course regardless of whether it is posted on Canvas, when it is posted on Canvas, and/or when you are able to access it on Canvas.

Learning Assistants (LAs): The class will offer a team of two LAs that will work as an additional resource available to every student enrolled in this class. This can enhance your learning experience and should be used as an asset to absorb/dissect any of the material from the class. Each LA will hold office hours on days and times posted on Canvas (subject to change throughout the semester). You are encouraged to attend any of these sessions with questions about the material covered (or to be covered) in class.

The names of the LAs are:

- Lamont Sharp
- Austin Skinner

You are expected to be respectful to all LAs and conduct yourself in a professional manner. Failure to do so may result in cancellation of this privilege. Please feel free to bring any concerns or questions to the instructor.

Accessibility: The University of Colorado Denver is committed to providing reasonable accommodation and access to programs and services to persons with disabilities. Students with disabilities who want academic accommodations must register with Disability Resources and Services (DRS), 2514 North Classroom Building, 303-556-3450, TTY 303-556-4766. Their staff will assist in determining reasonable accommodations as well as coordinating the approved accommodations. I will provide approved accommodations; once you provide me with documentation from the DRS. Exams taken at DRS must be taken concurrently with the class. Understand that taking exams at DRS may result in delays in grading or other minor inconsistencies with the rest of the class.

CLAS Incomplete (IW/IF) Policy: Incomplete grades (IW or IF) are NOT granted for low academic performance. To be eligible for an Incomplete grade, students MUST:

- Successfully complete a minimum of 75% of the course
- Have special circumstances beyond their control that preclude them from attending class and completing graded assignments
- Make arrangements to complete missing assignments with the original instructor.

Verification of special circumstances is required.

Ground Rules: To promote a lively, yet orderly class I have certain ground rules.

1. **Do not ask for an answer key.** Exams, quizzes, homework assignments, and practice problems are provided as a learning experience. I encourage students to ask questions in lecture and office hours.

Students tend to merely look at answers and not attempt the problems themselves when they are given a key. Therefore, I do not provide answer keys.

2. **Do not ask me to update Canvas with missing slides.** I do not provide EVERY side on blackboard that I present in class. This is done intentionally to force students to write things out themselves in class (I think this is the only way to learn mechanisms). If you need more time to take notes in class, I am happy to accommodate.
3. **If you are absent when I return an exam or quiz, do not ask any questions about that exam or quiz during lecture.** You are not graded on attendance. However, if you miss a class, the responsibility falls on you to make up that material.
4. **If you miss a lecture, do not ask any questions about that material during subsequent lectures.** Doing so means having the remainder of the class slow down to accommodate the fact that you missed a class. If you miss a class it is your responsibility to make up that material.
5. **Do not ask questions during an exam or quiz about the course material.** It is OK to ask questions of clarification about the wording of the questions. You may not bring up your answer and ask "is this what you are looking for?"

These ground rules are not meant to stifle interaction. On the contrary, I hope that if everyone in the class follows these rules, the level of dialog will be improved. If you have any concerns about any of these rules, please discuss them with me.

My Academic Dishonesty Policy: 1) Read the CLAS policies below. 2) If I have evidence that you have cheated, I will give you an F in the course and report you to the Academic Ethics Committee. 3) Any student in the University Honors program, the BA/BS-MD program, or seeking departmental honors should be aware that I will support your removal from these programs if the conditions of the cheating warrant it.

CLAS Academic Dishonesty Policy: Students are required to know, understand, and comply with the CU Denver Academic Dishonesty Policy as detailed in the Catalog and on the CLAS website. Academic dishonesty consists of plagiarism, cheating, fabrication and falsification, multiple submission of the same work, misuse of academic materials, and complicity in academic dishonesty. If you are not familiar with the definitions of these offenses, go to: <http://www.ucdenver.edu/academics/colleges/CLAS/faculty-staff/policies/HandlingAcademicDishonesty/Pages/Definition-of-Academic-Dishonesty.aspx> . This course assumes your knowledge of these policies and definitions. Failure to adhere to them can result in possible penalties ranging from failure of this course to dismissal from the University; so, be informed and be careful. If this is unclear to you, ask your professor.

Examples of academic dishonesty include, but are not limited to, the following:

- A. Plagiarism:** Plagiarism is the use of another person's distinctive words or ideas without acknowledgment. Examples include:
1. Word-for-word copying of another person's ideas or words;
 2. The mosaic (the interspersing of one's own words here and there while, in essence, copying another's work);
 3. The paraphrase (the rewriting of another's work, yet still using their fundamental idea or theory);
 4. Fabrication of references (inventing or counterfeiting sources);
 5. Submission of another's work as one's own;
 6. Neglecting quotation marks on material that is otherwise acknowledged.

- B. Cheating:** Cheating involves the possession, communication, or use of information, materials, notes, study aids or other devices not authorized by the instructor in an academic exercise, or communication with another person during such an exercise.
- C. Fabrication and Falsification:** Fabrication involves inventing or counterfeiting information, i.e., creating results not obtained in a study or laboratory experiment. Falsification, on the other hand, involves the deliberate alteration of results to suit one's needs in an experiment or other academic exercise.
- D. Multiple Submissions:** This is the submission of academic work for which academic credit has already been earned, when such submission is made without instructor authorization.
- E. Misuse of Academic Materials.**
- F. Complicity in Academic Dishonesty:** Complicity involves knowingly contributing to another's acts of academic dishonesty. Examples include:
 - 1. Knowingly aiding another in any act of academic dishonesty;
 - 2. Allowing another to copy from one's paper for an assignment or exam;

Expected Learning Outcomes (Spring, 2018)

Upon successful completion of the course:

- 1. Each student will possess an adequate knowledge base in organic chemistry and sub-disciplines of organic chemistry as defined by the American Chemical Society.
- 2. Each student will be able to rely on this knowledge base to link more than one chemical principle to solve problems, both qualitatively and quantitatively, individually and in groups.
- 3. Each student will be able to (a) recognize and define a general problem in any of several sub-disciplines of organic chemistry, and (b) competently solve and express in oral and written form the corresponding solution, adhering to proper chemical conventions.
- 4. Each student will be able to (a) identify when information is needed to solve a problem, (b) identify and locate appropriate sources of information, and (c) effectively extract and construct scientific meaning from critical reading of written material, including primary, secondary, and instructional literature.
- 5. Each student will be involved in reading research articles to increase awareness on the global importance of this topic.
- 6. Each student will be exposed to scientific writing using recent literature examples as a guide.

Class Topics: The topics listed below are meant to show the scope of what this class will cover, but they do not constitute an exhaustive list of what we will study. We will often be a day or more ahead of or behind the syllabus.

Topics:

14. THE CHEMISTRY OF ALKYNES

15. DIENES RESONANCE AND AROMATICITY

16. THE CHEMISTRY OF BENZENE AND ITS DERIVATIVES

17. ALLYLIC AND BENZYLIC REACTIVITY

18. THE CHEMISTRY OF ARYL HALIDES, VINYLIC HALIDES, AND PHENOLS. TRANSITION-METAL CATALYSIS

19. THE CHEMISTRY OF ALDEHYDES AND KETONES. CARBONYL-ADITION REACTIONS

20. THE CHEMISTRY OF CARBOXYLIC ACIDS
21. THE CHEMISTRY OF CARBOXYLIC ACID DERIVATIVES
22. THE CHEMISTRY OF ENOLATE IONS, ENOLS, AND α,β -UNSATURATED CARBONYL COMPOUNDS
23. THE CHEMISTRY OF AMINES
24. CARBOHYDRATES
25. THE CHEMISTRY OF AROMATIC HETEROCYCLES
26. AMINO ACIDS, PEPTIDES, AND PROTEINS
27. PERICYCLIC REACTIONS

Class Topics: The topics listed below are meant to show the scope of what this class will cover, but they do not constitute an exhaustive list of what we will study. We will often be a day or more ahead of, or behind, the syllabus. I will announce in class any changes that affect the content of an exam; use this schedule only as a general guide.

General Schedule (Tentative)

| Date | Topic of Study | Reading (Chapters) |
|-----------|---|--------------------|
| Jan 16/18 | Radicals and review | 1-13 |
| Jan 23/25 | Alkynes, dienes, resonance, and aromaticity | 14 and 15 |
| Jan 30 | Dienes and resonance (contd.) | 15 |
| Feb 1/6 | Benzene and derivatives | 16 |
| Feb 8 | Allylic/benzylic reactivity | 17 |
| Feb 13 | Review | |
| Feb 15 | Exam 1 | |
| Feb 20/22 | Aryl/vinyl halides, phenols, metals | 18 |
| Feb 27 | Aryl/vinyl halides, phenols, metals | 18 |
| Mar 1/6 | Carbonyl chemistry | 19 |
| Mar 8 | Carboxylic acids and derivatives | 20 and 21 |
| Mar 13/15 | Carbonyl compounds | 21 and 22 |
| Mar 19/24 | SPRING BREAK | |
| Mar 27 | Amines | 23 |
| Mar 29 | Review | |
| Apr 3 | Exam 2 | |
| Apr 5 | Carbohydrates | 24 |
| Apr 10/12 | Heterocycles/aminoacids, proteins | 25, 26 |
| Apr 17/19 | Aminoacids / Pericyclic reactions | 26, 27 |
| Apr 24/26 | Catch-up /Review | |
| May 1/3 | Review | |
| May 7/11 | FINALS week | |
| May ? | FINAL EXAM (to be set by AHEC) | |

1. Student Grievances

Student complaints about this course or instructor should be communicated directly to the instructor in a face-to-face meeting (unless this course is an online course). If the issues cannot be resolved, you should meet with the chairperson of the Chemistry Department. Contact 303-315-7650 to arrange a meeting. If meeting with chairperson does not resolve the issues, you may appeal to the Associate Dean of Student Success in the Office of the CLAS Dean (NC 5014, 303-315-7000). The decision of the Associate Dean is final. You may also meet with the CU Denver Ombudsman to ask for assistance. For additional information, please see the CLAS policy “Procedures for Student Grievances about Courses or Faculty” available from the Office of the CLAS Dean.

2. Tutoring & Student Assistance

The Learning Resources Center offers free drop-in (“open lab”) tutoring as well as scheduled small-group tutoring. “Open lab” tutoring does not require an appointment; see the posted schedule for available times. Scheduled tutoring requires that you sign up with the LRC. Spaces are available on a first-come-first-served basis and often fill up early in the semester. For more information about the LRC, see their website at www.ucdenver.edu/lrc. Tutoring is not provided directly by the instructor or the course teaching / learning assistants.

Academic Policies

The following policies, procedures, and deadlines pertain to all students taking courses in the College of Liberal Arts and Sciences (CLAS). They are aligned with the Official University Academic Calendar found on the [Registrar's website](#).

Schedule Verification

It is each student's responsibility to verify that their official registration and schedule of courses is correct in UCDAccess (*not* Canvas) before courses begin and by the university census date. Failure to verify schedule accuracy is not sufficient reason to justify post-census date adds. Access to a course through Canvas is not evidence of official enrollment.

Email

Students must activate and regularly check their official CU Denver email account for university related messages. Note: Canvas is not the location to access your CU Denver email account. Log into <http://www.ucdenver.edu/email/Pages/login.aspx>

Administrative Drops

Students may be administratively dropped if they do not meet the pre- and/or co-requisites for a course as detailed in the UCDAccess registration system. Students may also be administratively dropped from a course if the course syllabus articulates attendance expectations prior to census date and they do not meet those attendance expectations. Please note: this procedure does not apply to all courses and students should not rely upon it; if students plan to no longer complete a course, they are responsible to drop or withdraw from the course.

Post-Census Date Adds and Late Withdrawals

Post-census date adds (i.e., adding a course after census date) require a written petition, verifiable documentation, and dean's approval via CLAS Advising. Late withdrawals (i.e., withdrawing from one or more full-semester courses after the withdrawal deadline but before the late withdrawal deadline) require a [Late Withdrawal Petition](#) submitted to CLAS Advising (NC 1030 – 303-315-7100). If petitioning to late-withdraw from individual courses, instructor signatures are required. If petitioning to late-withdraw from the entire semester, instructor signatures are not required. Contact CLAS Advising (NC 1030 – 303-315-7100) for more information on post-census date adds and late withdrawals.

Co-Requisites and Drops/Withdrawals

Students dropping a course with co-requisite(s) before or by census date must drop the course and co-requisite(s). After census date, students withdrawing from a course with co-requisite(s) before or by the withdrawal deadline must withdraw from the course and co-requisite(s). After the withdrawal deadline, until the late withdrawal deadline, students may be able to withdraw from a course or co-requisite(s) based on instructor permission and approval of a [Late Withdrawal Petition](#).

Waitlists

The Office of the Registrar notifies students via their CU Denver email account if they are added to a course from a waitlist. Students will have access to Canvas when they are on a waitlist, but this does not indicate that the student is officially enrolled or guaranteed a seat in the course. If a student is not enrolled in a course after waitlists are purged, instructor permission is required for the student to enroll in the course. The student must complete a [Late Add Form](#) and submit it to the Registrar's Office (SCB 5005) by census date in order to enroll in the course.

Applicable Forms

Schedule Adjustment Form

Submit to Registrar (SCB 5005)

| Purpose: | Approval Signatures Required: | Dates: |
|---|---|-------------------------------|
| <i>Receive an academic overload</i> | <i>Student and CLAS Advising signatures</i> | <i>before Jan. 31 (5pm)</i> |
| <i>Receive a time conflict override</i> | <i>Student and instructor signatures</i> | <i>before Jan. 31 (5pm)</i> |
| <i>Designate a course pass/fail or no credit</i> | <i>Student signature</i> | <i>before Jan. 31 (5pm)</i> |
| <i>Withdraw from an intensive course before the withdrawal deadline</i> | <i>Student signature</i> | <i>Feb. 1 – April 1 (5pm)</i> |

Late Add Form

Submit to Registrar (SCB 5005)

| Purpose: | Approval Signatures Required: | Dates: |
|---|--|--------------------------------|
| <i>Add a course after the add deadline but before census date</i> | <i>Student and instructor signatures</i> | <i>Jan. 22 – Jan. 31 (5pm)</i> |

Post-Census Date Add Petition

Visit CLAS Advising (NC 1030) for more information

| Purpose: | Approval Required: | Dates: |
|--|--|----------------------|
| <i>Petition to add one or more full-semester courses after census date (verifiable documentation required)</i> | <i>Submitted petitions are reviewed by the CLAS Assistant Dean</i> | <i>after Jan. 31</i> |

Late Withdrawal Petition

Submit to CLAS Advising (NC 1030)

| Purpose: | Approval Signatures Required: | Dates: |
|--|--|------------------------------|
| <i>Petition to late-withdraw from a course after the withdrawal deadline but before the late withdrawal deadline</i> | <i>Student and instructor signatures</i> | <i>April 2 – May 2 (5pm)</i> |
| <i>Petition to late-withdraw from <u>all courses</u> in the semester after the withdrawal deadline but before the late withdrawal deadline</i> | <i>Student signature</i> | <i>April 2 – May 2 (5pm)</i> |

Academic Calendar

| | |
|----------------------------------|--|
| January 16 | Beginning of Semester – First day of classes. |
| January 21 (11:59 pm) | Add Deadline – Last day to add or waitlist a course using UCDAccess. After the add deadline but before census date, instructor permission on a Late Add Form is required to add courses. |
| January 22 (11:59 pm) | Drop Deadline – Last day to drop a course without \$100 drop fee, including section changes (i.e., changing to a different section of the same course). Students may drop courses using UCDAccess. No Adding of Courses is Permitted Today Waitlists Purged – All waitlists are eliminated today. Students should check their schedule in UCDAccess to confirm the courses in which they are officially enrolled. Canvas does not reflect official enrollment. |
| January 31 (5 pm) | Final Add Deadline (Instructor Permission Required) Last day to add full-semester courses. To add a full-semester course between the first add deadline and census date, instructor permission on a Late Add Form is required. Students may submit a completed Late Add Form to the Registrar’s Office (SCB 5005). After census date, a written petition, verifiable documentation, and dean’s approval via CLAS Advising (NC 1030 – 303-315-7100) are required to add a full-semester course. If a student’s post-census date add petition is approved, the student will be charged the full tuition amount. College Opportunity Fund (COF) may not apply to courses added late, and these credits may not be deducted from students’ lifetime hours. Final Drop Deadline Last day to drop full-semester courses with a financial adjustment. Each course dropped, including section changes, between the first drop deadline and census date generates a \$100 drop fee. Students may drop courses in UCDAccess. After census date, withdrawal from courses appears on transcripts with a grade of “W,” and no financial adjustment is made. After census date but before the withdrawal deadline, students may withdraw from full-semester courses using UCDAccess (instructor permission is not required). Graduation Application Deadline Last day to apply for graduation. Undergraduates are expected to make an appointment to see their academic advisors before census date to apply for graduation. Graduate students must complete the Intent to Graduate and Candidate for Degree forms. Pass/Fail, No Credit Deadline – Last day to request No Credit or Pass/Fail grade for a course using a Schedule Adjustment Form . |
| March 19 – 25 | Spring Break – No classes. Campus open. |
| April 1 (11:59 pm) | Withdrawal Deadline After census date, students may withdraw from full-semester courses using UCDAccess (instructor permission is not required). To withdraw from an intensive course, students may use a Schedule Adjustment Form . Withdrawal from courses appears on transcripts with a grade of “W” and no financial adjustment is made. After the withdrawal deadline but before the late withdrawal deadline, students may late-withdraw by submitting a Late Withdrawal Petition to CLAS Advising (NC 1030 – 303-315-7100). Contact CLAS Advising (NC 1030 – 303-315-7100) for more information. After census date, students withdrawing from a course with co-requisite(s) before or by the withdrawal deadline must withdraw from the course and co-requisite(s). After the withdrawal deadline, until the late withdrawal deadline, students may be able to withdraw from a course or co-requisite(s) based on instructor permission and approval of a Late Withdrawal Petition . |
| May 2 (5 pm) | Late Withdrawal Deadline Last day to petition to late-withdraw from one or more full-semester courses. Students may petition to late-withdraw by submitting a Late Withdrawal Petition to CLAS Advising (NC 1030 – 303-315-7100). If petitioning to late-withdraw from individual courses, instructor signatures are required. If petitioning to late-withdraw from the entire semester, instructor signatures are not required. Contact CLAS Advising (NC 1030 – 303-315-7100) for more information. After the withdrawal deadline, until the late withdrawal deadline, students may be able to withdraw from a course with co-requisite(s) based on instructor permission and approval of a Late Withdrawal Petition . After the late withdrawal deadline (or after grades are posted, whichever is sooner), only retroactive withdrawals are considered and verifiable documentation is required. Contact CLAS Advising (NC 1030 – 303-315-7100) for more information on retroactive withdrawals. |
| May 7 – 12 | Finals Week |
| May 12 | End of Semester Commencement Ceremony |
| May 17 | Final Grades Available – Official grades available in UCDAccess and transcripts (tentative). Canvas does not display final grades. |
| June 22 | Degrees Posted – Degrees posted for graduating students on transcripts. |

Census Date