COURSE OUTLINE

1. **Course:** CHEM 351, Organic Chemistry I - Winter 2020
   Lecture 01: MWF 10:00 - 10:50 in CHC 119

<table>
<thead>
<tr>
<th>Instructor</th>
<th>Email</th>
<th>Phone</th>
<th>Office</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr Bronwen Wheatley</td>
<td><a href="mailto:bmwwheat@ucalgary.ca">bmwwheat@ucalgary.ca</a></td>
<td>403 220-8077</td>
<td>SA 144C</td>
<td>please see D2L</td>
</tr>
</tbody>
</table>

   Dr. Wheatley is the course coordinator, the laboratory coordinator, and the tutorial coordinator.


   Please consult the Department of Chemistry (SA 229, 403-220-5341, chem.info@ucalgary.ca) for other inquiries.

2. **Course Site:**
   D2L: CHEM 351 L01-(Winter 2020)-Organic Chemistry I - W2020CHEM351L01

   **Note:** Students must use their U of C account for all course correspondence.

3. **Requisites:**
   See section 3.5.C in the Faculty of Science section of the online Calendar.

   **Prerequisite(s):**
   Chemistry 201 or 211; and 203 or 213.

   **Antirequisite(s):**
   Credit for Chemistry 351 and 357 will not be allowed.

3. **Grading:**
   The University policy on grading and related matters is described in F.1 and F.2 of the online University Calendar.

   In determining the overall grade in the course the following weights will be used:

<table>
<thead>
<tr>
<th>Component(s)</th>
<th>Weighting %</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>online tutorial exercises</td>
<td>10%</td>
<td>January 27-31, February 10-14, March 16-20, March 30-April 3, April 6-9 2020</td>
</tr>
<tr>
<td>in-person tutorial exercises</td>
<td>10%</td>
<td>February 27-28, March 12-13, March 26-27</td>
</tr>
<tr>
<td>first midterm</td>
<td>10%</td>
<td>February 7, 2020</td>
</tr>
<tr>
<td>second midterm</td>
<td>20%</td>
<td>March 6, 2020</td>
</tr>
<tr>
<td>final exam</td>
<td>35%</td>
<td>Registrar-scheduled</td>
</tr>
</tbody>
</table>

   Each piece of work (reports, assignments, quizzes, midterm exam(s) or final examination) submitted by the student will be assigned a grade. The student's grade for each component listed above will be combined with the indicated weights to produce an overall percentage for the course, which will be used to determine the course letter grade.

   The conversion between a percentage grade and letter grade is as follows.

<table>
<thead>
<tr>
<th>Minimum % Required</th>
<th>A+</th>
<th>A-</th>
<th>A</th>
<th>B+</th>
<th>B</th>
<th>B-</th>
<th>C+</th>
<th>C</th>
<th>C-</th>
<th>D+</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>95</td>
<td>90</td>
<td>85</td>
<td>80</td>
<td>75</td>
<td>70</td>
<td>65</td>
<td>60</td>
<td>55</td>
<td>50</td>
<td>45</td>
<td></td>
</tr>
</tbody>
</table>
This course has a registrar scheduled final exam.

In order to satisfy the prerequisite requirements (i.e., C-) for further CHEM courses, a student must meet the following requirements: (1) achieve a minimum 50% in the laboratory grading, and (2) achieve either a minimum 50% on the Final examination, or a minimum 50% weighted average of all examinations (midterm exams and final exam). Therefore, the highest grade that can be assigned to CHEM 351 students who score below 50% in either the laboratory component or the examinations is a D+.

4. **Missed Components Of Term Work:**

In the event that a student misses the midterm or any course work due to illness, supporting documentation, such as a medical note or a statutory declaration will be required (see Section M.1; for more information regarding the use of statutory declaration/medical notes, see FAQ). Absences must be reported within 48 hrs.

The regulations of the Faculty of Science pertaining to this matter are found in the Faculty of Science area of the Calendar in Section 3.6. It is the student’s responsibility to familiarize themselves with these regulations. See also Section E.3 of the University Calendar.

There are no deferred midterm examinations or deferred in-person tutorial work. Make-up lab sessions might be possible; please contact the laboratory coordinator (bmmwheat@ucalgary.ca) as soon as possible if you have missed a lab in case a make-up lab can be arranged. If a student missed an experiment or a make-up lab for non-legitimate reasons (e.g. vacation, incomplete or insufficient score in pre-lab assignment), and did not perform the experiment, the contribution of that experiment in the final course grade will be zero.

Analogous documentation will be required for students who miss either midterm exam for other reasons. The course coordinator will need to see the original documentation (not an electronic copy) for review / decision and keep it (or a copy) for her records. The documentation must be provided to the course coordinator within 15 days of the date of the exam in order for an excused absence to be considered. If an excused absence is approved, then the percentage weight of a legitimately missed midterm examination will be pro-rated among the remaining components of the course.

5. **Scheduled Out-of-Class Activities:**

The following out of class activities are scheduled for this course.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Location</th>
<th>Date and Time</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Midterm exam</td>
<td>TBA</td>
<td>Friday, February 7, 2020 at 5:00 pm</td>
<td>2 Hours</td>
</tr>
<tr>
<td>Midterm exam</td>
<td>TBA</td>
<td>Friday, March 6, 2020 at 5:00 pm</td>
<td>2 Hours</td>
</tr>
</tbody>
</table>

**REGULARLY SCHEDULED CLASSES HAVE PRECEDENCE OVER ANY OUT-OF-CLASS-TIME-ACTIVITY.** If you have a conflict with the out-of-class-time-activity, please contact your course coordinator/instructor no later than **14 days prior** to the date of the out-of-class activity so that alternative arrangements may be made.

6. **Course Materials:**

An organic chemistry molecular model kit is optional; the kit (without the instruction sheet) is allowed during examinations.

Students must bring their own laboratory coats, safety glasses, and laboratory notebook to each lab period, and must also bring one combination lock for their laboratory drawers.
7. **Examination Policy:**

All information needed to write exams will be provided to students in their exam booklets. Students need writing utensils to write the exams, and may bring their own non-programmable calculators and model kits to use during the exams. No other materials or devices may be used during the exams. Students should have their student ID cards with them, and seating will be assigned. Different exam versions might be used, although the content examined will be similar.

Special Needs students must be registered with Student Accessibility Services (see Section 11(c) below), and must identify themselves to their instructor as soon as possible.

In F19 and W20 as part of a continuing pilot program, Chem 351 will provide a supplemental examination option for eligible students. Supplemental examinations provide some students who have earned a D+ or lower overall with an additional opportunity to demonstrate prerequisite competence and earn a "C-" grade in the course so that it can be used as a prerequisite. Further details on the Faculty of Science regulations and fee for supplemental examinations are found in the Faculty of Science area on the Calendar in section 3.6

Students should also read the Calendar, Section G, on Examinations.

8. **Approved Mandatory And Optional Course Supplemental Fees:**

Laboratory Breakage Fees and Locker Check-out: The Department of Chemistry has a laboratory glassware breakage fee. At the start of the course, each student is assigned a locker and checks-in to establish that they have a complete set of usable glassware. By signing for check-in, students agree that they are now responsible for the glassware until check out. Any equipment that is missing, unusable, or has been replaced during the semester will be charged to the student. All students, even those who withdraw early from the course must check out of the laboratory before the last day of lectures (April 15, 2020). Any student who fails to check out before the last day of lectures for the term will be assessed a charge of $30.00. If this fee is not paid by the last day of the final examination period of the term, an additional $10.00 administrative fee will be charged and university services (registration, transcripts, etc.) may be withheld.

9. **Writing Across The Curriculum Statement:**

For all components of the course, in any written work, the quality of the student's writing (language, spelling, grammar, presentation etc.) can be a factor in the evaluation of the work. See also Section E.2 of the University Calendar.

10. **Human Studies Statement:**

If you agree, your course work may be used for research purposes. Your responses will remain anonymous and confidential. Grouped data (no individual responses) may be used in academic presentations and publications. Participation in such research is voluntary and will not influence grades in this course. Students' signed consent forms will be withheld from instructors until after final grades are submitted. More information will be provided at the time student participation is requested.

See also Section E.5 of the University Calendar.

Students will be invited to participate in a study during the first week of lectures. The study has been approved by the University of Calgary Conjoint Faculties Research Ethics Board (CFREB File number: REB19-1091) and information about the study will be posted to D2L.

11. **Reappraisal Of Grades:**

A student wishing a reappraisal, should first attempt to review the graded work with the Course coordinator/instructor or department offering the course. Students with sufficient academic grounds may request a reappraisal. **Non-academic grounds are not relevant for grade reappraisals.** Students should be aware that the grade being reappraised may be raised, lowered or remain the same. See Section I.3 of the University Calendar.

a. **Term Work:** The student should present their rationale as effectively and as fully as possible to the Course coordinator/instructor within **ten business days** of either being notified about the mark, or of the item's return to the class. If the student is not satisfied with the outcome, the student shall submit the Reappraisal of Graded Term work form to the department in which the course is offered within 2 business days of receiving the decision from the instructor. The Department will arrange for a reappraisal of the work within the next ten business days. The reappraisal will only be considered if the student provides a detailed rationale that outlines where and for what reason an error is suspected. See sections I.1 and I.2 of the University Calendar.

b. **Final Exam:** The student shall submit the request to Enrolment Services. See Section I.3 of the University Calendar.
12. **Other Important Information For Students:**

   a. **Mental Health:** The University of Calgary recognizes the pivotal role that student mental health plays in physical health, social connectedness and academic success, and aspires to create a caring and supportive campus community where individuals can freely talk about mental health and receive supports when needed. We encourage you to explore the mental health resources available throughout the university community, such as counselling, self-help resources, peer support or skills-building available through the SU Wellness Centre (Room 370, MacEwan Student Centre, [Mental Health Services Website]) and the Campus Mental Health Strategy website (Mental Health).

   b. **SU Wellness Center:** The Students Union Wellness Centre provides health and wellness support for students including information and counselling on physical health, mental health and nutrition. For more information, see [www.ucalgary.ca/wellnesscentre](http://www.ucalgary.ca/wellnesscentre) or call 403-210-9355.

   c. **Sexual Violence:** The University of Calgary is committed to fostering a safe, productive learning environment. The Sexual Violence Policy ([https://www.ucalgary.ca/policies/files/policies/sexual-violence-policy.pdf](https://www.ucalgary.ca/policies/files/policies/sexual-violence-policy.pdf)) is a fundamental element in creating and sustaining a safer campus environment for all community members. We understand that sexual violence can undermine students' academic success and we encourage students who have experienced some form of sexual misconduct to talk to someone about their experience, so they can get the support they need. The Sexual Violence Support Advocate, Carla Bertsch, can provide confidential support and information regarding sexual violence to all members of the university community. Carla can be reached by email (svsa@ucalgary.ca) or phone at 403-220-2208.

   d. **Misconduct:** Academic misconduct (cheating, plagiarism, or any other form) is a very serious offence that will be dealt with rigorously in all cases. A single offence may lead to disciplinary probation or suspension or expulsion. The Faculty of Science follows a zero tolerance policy regarding dishonesty. Please read the sections of the University Calendar under Section K. Student Misconduct to inform yourself of definitions, processes and penalties. Examples of academic misconduct may include: submitting or presenting work as if it were the student's own work when it is not; submitting or presenting work in one course which has also been submitted in another course without the instructor's permission; collaborating in whole or in part without prior agreement of the instructor; borrowing experimental values from others without the instructor's approval; falsification/fabrication of experimental values in a report. These are only examples.

   e. **Assembly Points:** In case of emergency during class time, be sure to FAMILIARIZE YOURSELF with the information on assembly points.

   f. **Academic Accommodation Policy:** Students needing an accommodation because of a disability or medical condition should contact Student Accessibility Services in accordance with the procedure for accommodations for students with disabilities available at [procedure-for-accommodations-for-students-with-disabilities.pdf](http://procedure-for-accommodations-for-students-with-disabilities.pdf).

   Students needing an accommodation in relation to their coursework or to fulfill requirements for a graduate degree, based on a protected ground other than disability, should communicate this need, preferably in writing, to the Associate Head of the Department of Chemistry, Dr. Farideh Jalilehvand by email ahugchem@ucalgary.ca or phone 403-220-5353. Religious accommodation requests relating to class, test or exam scheduling or absences must be submitted no later than 14 days prior to the date in question. See Section E.4 of the University Calendar.

   g. **Safewalk:** Campus Security will escort individuals day or night (See the Campus Safewalk website). Call 403-220-5333 for assistance. Use any campus phone, emergency phone or the yellow phones located at most parking lot pay booths.

   h. **Freedom of Information and Privacy:** This course is conducted in accordance with the Freedom of Information and Protection of Privacy Act (FOIPP). Students should identify themselves on all written work by placing their name on the front page and their ID number on each subsequent page. For more information, see [Legal Services](http://legal.ucalgary.ca) website.

   i. **Student Union Information:** [VP Academic](mailto:sciencerep@su.ucalgary.ca), Phone: 403-220-3913 Email: sciencerep@su.ucalgary.ca. [SU Faculty Rep.](mailto:ahugchem@ucalgary.ca), Phone: 403-220-3911 Email: suvpaca@ucalgary.ca. [SU Student Ombudsman](mailto:ombuds@ucalgary.ca), Email: ombuds@ucalgary.ca.

   j. **Internet and Electronic Device Information:** Unless instructed otherwise, cell phones should be turned off during class. All communication with other individuals via laptop, tablet, smart phone or other device is prohibited during class unless specifically permitted by the instructor. Students that violate this policy may be asked to leave the classroom. Repeated violations may result in a charge of misconduct.
k. **Surveys:** At the University of Calgary, feedback through the Universal Student Ratings of Instruction (USRI) survey and the Faculty of Science Teaching Feedback form provides valuable information to help with evaluating instruction, enhancing learning and teaching, and selecting courses. Your responses make a difference - please participate in these surveys.

l. **Copyright of Course Materials:** All course materials (including those posted on the course D2L site, a course website, or used in any teaching activity such as (but not limited to) examinations, quizzes, assignments, laboratory manuals, lecture slides or lecture materials and other course notes) are protected by law. These materials are for the sole use of students registered in this course and must not be redistributed. Sharing these materials with anyone else would be a breach of the terms and conditions governing student access to D2L, as well as a violation of the copyright in these materials, and may be pursued as a case of student academic or non-academic misconduct, in addition to any other remedies available at law.

**Course Outcomes:**

- Recognize and employ the conventions of naming, structure drawing, and curved arrow pushing to communicate about organic compounds
- Draw reaction mechanisms with appropriate curved arrows to account for how bonds are made and broken in organic reactions
- Analyze the structural features of starting materials, reaction intermediates, and products to predict or rationalize their physical properties or reaction behaviour
- Identify and interpret spectral data to deduce the structure of simple organic molecules
- Perform laboratory experiments using techniques that are safe and appropriate for handling and manipulating organic compounds.
- Propose a short (ca. 1-4 step), feasible synthesis for the formation of a specific organic product using a limited number of possible reaction types: acid/base, radical substitution, nucleophilic substitution, or elimination reactions.