



COURSE OUTLINE

1. **Course:** CHEM 409, Appl Chem & Chem Path For Engg - Fall 2020

Lecture 01: TR 08:00 - 09:15 - Online

Instructor	Email	Phone	Office	Hours
Maryam Izadifard	maryam.izadifard@ucalgary.ca		SA 258	TBA
Maryam Izadifard	TBA	TBA	TBA	TBA

Online Delivery Details:

This course is being offered online in real-time via scheduled meeting times, you are required to be online at the same time.

Lectures will take place synchronously via Zoom during the registrar-scheduled timeslot. Lectures will not be recorded, so attendance and participation in all classes is highly recommended. In addition, group quizzes will take place synchronously in-class on Oct 1, 13 and Nov 24, and group presentations will take place synchronously in-class from Oct 15 to Oct 27. During group presentation dates where a student is not presenting with their group, they are expected to attend and engage with the other presentations.

The midterm and final exam will occur synchronously via D2L (see dates and times in Section 3). All other course assignments not mentioned above will be submitted asynchronously.

For email inquiries about the course, please expect a reply within roughly 1-business day.

Course Site:

D2L: CHEM 409 L01-(Fall 2020)-Appl Chem & Chem Path For Engg

<https://d2l.ucalgary.ca/d2l/home/328070>

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

2. **Requisites:**

See section [3.5.C](#) in the Faculty of Science section of the online Calendar.

Prerequisite(s):

Chemistry 209 and 357.

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:

Component(s)	Weighting %	Date	Timing
Literature assignment (individual)	5%	Due Sep 21	Asynchronous - available Sep 15
Infographic assignment (individual)	10%	Due Oct 1	Asynchronous - available Sep 24
Group quizzes	3 x 5%	Oct 1, Oct 13, Nov 24	Synchronous - in-class
Group presentations	10%	Oct 15-27	Synchronous - in-class
Midterm exam (individual)	10%	Nov 5 at 7 pm	Synchronous - out-of-class
Group posters	10%	Posters due Nov 26 Gallery walk during Week of Nov 30	Asynchronous
Final exam (individual)	40%	Registrar-scheduled	Synchronous

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.

	A+	A	A-	B+	B	B-	C+	C	C-	D+	D
Minimum % Required	95 %	90 %	85 %	80%	75%	70 %	65 %	60%	55%	50 %	45 %

This course has a registrar scheduled final exam.

For any synchronous assessment, time will be adjusted for SAS students if needed and accommodations for students will be done on a case-by-case basis. Students needing accommodation for synchronous assessments due to extenuating circumstances (e.g. significant timezone differences, etc.) should contact the instructor **no later than Mon Sep 21** to ensure that these needs are taken into account when groups are assigned for the term. Students in this situation may be placed in a smaller group to accommodate group work occurring at an alternative time.

Late assignments. If a student realizes that they will be unable to submit an individual assignment by the scheduled due date due to technical issues or other concerns, they should contact the instructor as soon as possible to discuss possible accommodations on a case-by-case basis.

Group quizzes (75 min, synchronous, in-class). Each group quiz is designed to be completed by students in their assigned groups during class time. Students must join their group's breakout room in order to participate and receive credit. All group members who are present during a given group quiz will receive the same score based on their group's submitted quiz. Each quiz is designed to be completed in 50-minutes, but an additional 50% buffer time has been provided for technical issues.

Group presentations and posters. Group presentations (Oct 15-27) will take place synchronously during class time, and will include time for question and answer. Student grades on the presentation will include a group grade for the presentation, as well as an individual peer-evaluation grade, and an individual participation grade from their engagement during other teams' presentations.

Group posters and video summaries will be submitted by D2L by Nov 26. These posters and videos will then be made available for an online 'gallery walk', where students will asynchronously view other teams' work and ask questions. Synchronous classes will be cancelled during the week of Nov 30 so that students may use this time to engage with other teams' work. Each student's grade on this assignment will include,

- a group grade for the submitted poster, summary, and responses to posted questions,
- an individual peer-evaluation grade reflecting their contributions to their group, and,
- an individual grade reflecting their participation and questions asked in the gallery walk.

Midterm exam (2 hours, synchronous, Nov 5 at 7pm). The midterm is designed to be completed individually in 80-minutes, but an additional 50% buffer time has been provided for technical issues. See Sections 5 and 7 for more details.

Final exam (4.5 hours, synchronous). The final exam is designed to be completed individually in 3-hours, but an additional 50% buffer time has been provided for technical issues. See section 7 for more details.

4. Missed Components Of Term Work:

The university has suspended the requirement for students to provide evidence for absences. Please do not attend medical clinics for medical notes or Commissioners for Oaths for statutory declarations.

In the event that a student legitimately fails to submit any online assessment on time (e.g. due to illness etc...), please contact the course coordinator, or the course instructor if this course does not have a coordinator to arrange for a re-adjustment of a submission date. Absences not reported within 48 hours will not be accommodated. If an excused absence is approved, then the percentage weight of the legitimately missed assignment could also be pro-rated among the components of the course.

There are no deferred quizzes or midterm examinations.

- **Missed group quiz.** If an individual is absent from their group during a scheduled group quiz, they are not eligible to receive the group assessment score for that quiz. If an excused absence is approved, the percentage weight of that quiz will be pro-rated among the remaining group quizzes for that individual student.
- **Missed midterm exam.** If an excused absence is approved, then the percentage weight of the missed midterm examination will be transferred to the final examination.

5. Scheduled Out-of-Class Activities:

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

Activity	Location	Date and Time	Duration
Midterm	Online (D2L)	Thursday, November 5, 2020 at 7:00 pm	2 Hours

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:

Recommended Textbook(s):

Jacob A. Moulijn, Michiel Makkee, Annelies E. van Diepen, *Chemical Process Technology (2nd edition)*: Wiley.
 Andreas Jess & Peter Wasserscheid, *Chemical Technology: An Integral Textbook*: Wiley.

In order to successfully engage in their learning experiences at the University of Calgary, students taking online, remote and blended courses are required to have reliable access to the following technology:

- A computer with a supported operating system, as well as the latest security, and malware updates;
- A current and updated web browser;
- Webcam/Camera (built-in or external);
- Microphone and speaker (built-in or external), or headset with microphone;
- Current antivirus and/or firewall software enabled;
- Stable internet connection.

For more information please refer to the UofC [ELearning](#) online website.

7. Examination Policy:

Quizzes, midterms and final exams are all open-book; students are **only** allowed to use their lecture notes, course materials posted to D2L, and the recommended course textbooks listed in this outline.

Group quizzes are to be completed **within the assigned groups** - communication with individuals outside of the group (other than the instructor) during the quiz is not permitted. Midterm and Final exams are to be completed **individually** by the student - communication with anyone other than the course instructor during the exam is not permitted.

Students should also read the Calendar, [Section G](#), on Examinations.

8. Approved Mandatory And Optional Course Supplemental Fees:

There are no mandatory or optional course supplemental fees for this course.

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:

Students will not participate as subjects or researchers in human studies.

See also [Section E.5](#) of the University Calendar.

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 Services:** For more information, see www.ucalgary.ca/wellnesscentre or call [403-210-9355](tel:403-210-9355).
- c. **Sexual Violence:** 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 (syva@ucalgary.ca) or phone at [403-220-2208](tel:403-220-2208). The complete University of Calgary policy on sexual violence can be viewed at (<https://www.ucalgary.ca/policies/files/policies/sexual-violence-policy.pdf>)
- 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. **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](#).

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. Yuen-Ying Carpenter by email ahugchem@ucalgary.ca or phone 403-220-6908. 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.

- f. **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](#) website.
- g. **Student Union Information:** [VP Academic](#), Phone: [403-220-3911](tel:403-220-3911) Email: suvpaca@ucalgary.ca. SU Faculty Rep., Phone: [403-220-3913](tel:403-220-3913) Email: sciencerep@su.ucalgary.ca. [Student Ombudsman](#), Email: ombuds@ucalgary.ca.
- h. **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.

- i. **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:

- Integrate the knowledge of fundamental chemistry concepts to deconstruct the design of modern industrial scale chemical processes. Then be able to use these fundamental concepts to “design” a chemical process from the ground-up.
- By using fundamental chemistry knowledge, to further develop the ability to find, assess, interpret, and deconstruct literature related to processes involved in chemical industry.
- Further develop the ability to communicate, present, and give detailed explanations of the chemistry behind phenomena related to chemical processes; using team-based learning, oral, poster, written and pictographical presentations.

Electronically Approved - Sep 15 2020 15:47

Department Approval

Electronically Approved - Sep 15 2020 15:53

Associate Dean's Approval