

## Chemistry 3330 Course Outline

### 1. Course Information

Industrial Chemistry 3330F, [REDACTED]

#### List of Prerequisites

Either (Chemistry 2273A and 2283G) or Chemistry 2213A/B, and either Chemistry 2214A/B or 2384B.

Unless you have either the requisites for this course or written special permission from your Dean's Designate (Department/Program Counsellors and Science Academic Advisors) to enroll in it, you may be removed from this course and it will be deleted from your record. This decision may not be appealed. You will receive no adjustment to your fees in the event that you are dropped from a course for failing to have the necessary prerequisites.

### 2. Instructor Information

Instructors	Email	Office	Phone	Office Hours
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

Students must use their Western (@uwo.ca) email addresses when contacting their instructors.

### 3. Course Syllabus, Schedule, Delivery Mode

This course will address industrial applications of chemistry, including:

- a survey of the chemical industry and its principal products
- comparative economics of chemical processes
- quality assurance
- safety
- environmental issues
- employment and careers in the chemical industry

Some of this material will be presented in lecture format by your instructor. Additionally, guest speakers with relevant professional experience will share first-hand knowledge of different aspects of the chemical industry.

**Expected Learning Outcomes:** The intention is that students will acquire an appreciation for the ubiquity, diversity, importance, excitement, and challenges of the modern chemical industry and observe some of the concerns and motivations that drive the industry. Students should begin to discover some of the career opportunities in chemistry that are open to them, begin to make networking contacts with industry professionals, and develop a strategic approach to job-seeking in the chemical field.

**Delivery Modes:** The course will be delivered through a mixture of in-class presentations by the course instructor, a series of guest lecturers from various sectors of the chemical industry, and a modest amount of independent research by the students themselves. The flexibility afforded by videoconferencing software will greatly enhance our opportunities to hear from industry personnel stationed near or far from Western University. Therefore, some guest lecturers may be physically present in class, and others may make their presentations electronically. To facilitate student questions and discussion with the guest lecturers, students are expected to be present in class for these lectures, even if they are delivered by a guest lecturer who presents online. **\*\*Students will not be able to access guest lectures remotely. Guest lectures will NOT be recorded for later viewing.**

**Topics:** (timing approximate)

a) Introduction to the chemical industry and industry sectors: (Week 1)

- Petrochemical
- Pharmaceutical
- Chlor-alkali
- Agrochemical
- Biotech

b) Health and safety in the chemical industry (~Week 2)

c) Quality assurance (~Week 3)

d) Energy (~Weeks 4 - 8)

e) Sources of chemicals (~Weeks 9 - 11)

f) Environmental impact and sustainability (~Weeks 12 - 14)

**Key Sessional Dates:**

Classes begin: September 5, 2024

Fall Reading Week: October 12 – 20

Classes end: December 6, 2024

Exam period: December 9 – 22, 2024

## 4. Course Materials

I am not requiring (or even recommending) any textbook purchases. There are various books, several of them available in the library, that provide relevant information on a broad spectrum of issues and applications in the chemical industry, but they are all dated. Most of them are older than most of the students in the class. Relevant and modern industry information is typically considered confidential/proprietary by the companies and inaccessible to us, except for the limited details shared by the visiting speakers.

Students are responsible for checking the course OWL site (<http://owl.uwo.ca>) on a regular basis for news and updates. This is the primary method by which information will be disseminated to all students in the class.

All course material will be posted to OWL: <https://westernu.brightspace.com/>. **Guest lectures will not be recorded; students must be present in class during guest lectures.**

Students are responsible for checking the course OWL site (<https://westernu.brightspace.com/>) regularly for news and updates. This is the primary method by which information will be disseminated to all students in the class.

If students need assistance with the course OWL site, they can seek support on the [OWL Brightspace Help](#) page. Alternatively, they can contact the Western Technology Services Helpdesk. They can be contacted by phone at 519-661-3800 or ext. 83800.

## 5. Methods of Evaluation

### Grading Scheme and Assessment Dates

The overall course grade will be calculated as listed below:

Assignments (2)	20%
In-class speaker summaries (10)	20%
Midterm Test	20%
Final Exam	40%

All work submitted for a grade in this course must be your personal work. The submission of material obtained externally or written by artificial intelligence software is prohibited.

### Important Dates:

Assignment #1 due: Tues. Oct. 8, 2024

Assignment #2 due: Tues. Nov. 26, 2024

Midterm test (in-class): Tues. Oct. 29, 2024

Final examination: TBA (set by the Registrar, during the final examination period)

In-class speaker summaries will consist of a printed questionnaire-style evaluation with **short** answers to be written in the space provided right on the question page. The answers to the questions will be readily available to students by listening carefully to the guest lecturer's presentation and by asking questions of the guest lecturer. The summary must be submitted at the end of the class period during which the guest lecture was presented (i.e., you must attend each guest lecture and submit the speaker summary at the end of the talk).

The midterm test will cover all course content up to and including the class of Oct. 22. Academic considerations for a missed midterm must include formal documentation confirming a valid excuse.

The final examination, to be scheduled by the Registrar, is cumulative (i.e., it will cover all course material from the beginning to the end of the course).

### General information about missed coursework

Students must familiarize themselves with the *University Policy on Academic Consideration – Undergraduate Students in First Entry Programs* posted on the Academic Calendar:

[https://www.uwo.ca/univsec/pdf/academic\\_policies/appeals/academic\\_consideration\\_Sep24.pdf](https://www.uwo.ca/univsec/pdf/academic_policies/appeals/academic_consideration_Sep24.pdf),

This policy does not apply to requests for Academic Consideration submitted for **attempted or completed work**, whether online or in person.

The policy also does not apply to students experiencing longer-term impacts on their academic responsibilities. These students should consult [Accessible Education](#).

For procedures on how to submit Academic Consideration requests, please see the information posted on the Office of the Registrar's webpage:

[https://registrar.uwo.ca/academics/academic\\_considerations/](https://registrar.uwo.ca/academics/academic_considerations/)

**All requests for Academic Consideration must be made within 48 hours after the assessment date or submission deadline.**

All Academic Consideration requests must include supporting documentation; however, recognizing that formal documentation may not be available in some extenuating circumstances, the policy allows students to make one Academic Consideration request **without supporting documentation** in this course. However, the following assessments are excluded from this, and therefore always require formal supporting documentation:

- Examinations scheduled during official examination periods (Defined by policy)
- The midterm test (Designated by the instructor as the one assessment that always requires documentation when requesting Academic Consideration).

When a student *mistakenly* submits their one allowed Academic Consideration request **without supporting documentation** for the assessments listed above or those in the **Coursework with Assessment Flexibility** section below, the request cannot be recalled and reapplied. This privilege is forfeited.

### **Evaluation Scheme for Missed Assessments**

Given the long period available to work on each **assignment**, late assignments will be accepted up to 48 h beyond the due date, after which a grade of zero will be assigned.

Flexibility has been built into the **speaker summaries** assessment series. The grade (out of 20%) for this aspect of the course will be calculated based on the average of the best 7 submissions by each student. Late submissions of speaker summaries will not be accepted. Missed submissions will be assigned a grade of zero. Given the described flexibility, academic considerations for missed speaker summaries will be neither required nor accepted.

A makeup midterm test will be offered for students with valid academic considerations supported by formal documentation. For students who also have valid academic considerations for the makeup midterm test, the weight of the test will be added to that of the final exam.

When a student misses the Final Exam and their Academic Consideration has been granted, they will be allowed to write the Special Examination (the name given by the University to a makeup Final Exam). See the Academic Calendar for details (under [Special Examinations](#)), especially for those who miss multiple final exams within one examination period.

### **Essential Learning Requirements**

Even when Academic Considerations are granted for missed coursework, the following are deemed essential to earn a passing grade.

- **Students must attend and submit speaker summaries for a minimum of 5 of the 10 lectures by visiting speakers.** Students not achieving this minimum level of participation will receive a maximum overall grade of no higher than 40% in the course, regardless of their performance on the assignments, speaker summaries, midterm test, and final examination.
- **Students must achieve a passing grade (at least 5/10) on at least one of the assignments.** Students not achieving this minimum level of proficiency will receive a maximum overall grade of no higher than 40% in the course, regardless of their performance on the assignments, speaker summaries, midterm test, and final examination.

In the unusual case of Academic Considerations precluding the achievement of one of these requirements, the student will receive a grade of Incomplete (INC), the student will have an opportunity to complete the course requirements when the course is next offered, and their maximum course load may be reduced during the term in which they complete their course requirements.

### **Coursework with Assessment Flexibility**

By policy, instructors may deny Academic Consideration requests for the following assessments with built-in flexibility:

- Flexibility has been built into the **speaker summaries** assessment series. The grade (out of 20%) for this aspect of the course will be calculated based on the average of the best 7 submissions by each student. Late submissions of speaker summaries will not be accepted. Missed submissions will be assigned a grade of zero. Given the described flexibility, academic considerations for missed speaker summaries will be neither required nor accepted.

### **Deadline with a No-Late-Penalty Period**

- **Assignments.** Students are expected to submit each of the 2 assignments by the deadline listed. Should extenuating circumstances arise, students do not need to request Academic Consideration and they are permitted to submit their assignment up to 48 hours past the deadline without a late penalty. Should students submit their assessment beyond 48 hours past the deadline, a late penalty of 100% per day will be applied. Academic Consideration requests may be granted only for extenuating circumstances that started before the deadline and lasted longer than the No-Late-Penalty Period (48 hours).

## **6. Additional Statements**

### **Religious Accommodation**

When conflicts with a religious holiday that requires an absence from the University or prohibits certain activities, students should request an accommodation for their absence in writing to the course instructor and/or the Academic Advising office of their Faculty of Registration. This notice should be made as early as possible but not later than two weeks prior to the writing or the examination (or one week prior to the writing of the test).

Please visit the Diversity Calendars posted on our university's EDID website for the recognized religious holidays:

<https://www.edi.uwo.ca>.

### **Accommodation Policies**

Students with disabilities are encouraged to contact Accessible Education, which provides recommendations for accommodation based on medical documentation or psychological and cognitive testing. The policy on Academic Accommodation for Students with Disabilities can be found at:

[https://www.uwo.ca/univsec/pdf/academic\\_policies/appeals/Academic\\_Accommodation\\_disabilities.pdf](https://www.uwo.ca/univsec/pdf/academic_policies/appeals/Academic_Accommodation_disabilities.pdf).

## **Academic Policies**

The website for Registrar Services is <https://www.registrar.uwo.ca/>.

In accordance with policy,

[https://www.uwo.ca/univsec/pdf/policies\\_procedures/section1/mapp113.pdf](https://www.uwo.ca/univsec/pdf/policies_procedures/section1/mapp113.pdf),

the centrally administered e-mail account provided to students will be considered the individual's official university e-mail address. It is the responsibility of the account holder to ensure that e-mail received from the University at their official university address is attended to in a timely manner.

A non-programmable calculator will be permitted for use on the midterm test and final examination. No other electronic aids may be used.

**Scholastic offences** are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, at the following Web site:

[https://www.uwo.ca/univsec/pdf/academic\\_policies/appeals/scholastic\\_discipline\\_undergrad.pdf](https://www.uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_discipline_undergrad.pdf).

All submitted papers may be subject to submission for textual similarity review to the commercial plagiarism detection software under license to the University for the detection of plagiarism. All papers submitted for such checking will be included as source documents in the reference database for the purpose of detecting plagiarism of papers subsequently submitted to the system. Use of the service is subject to the licensing agreement, currently between The University of Western Ontario and Turnitin.com (<http://www.turnitin.com>).

Remote Proctoring Software: In the event of health lock-down, tests and examinations in this course will be conducted using a remote proctoring service. By taking this course, you are consenting to the use of this software and acknowledge that you will be required to provide **personal information** (including some biometric data) and the session will be **recorded**. Completion of this course will require you to have a reliable internet connection and a device that meets the technical requirements for this service. More information about this remote proctoring service, including technical requirements, is available on Western's Remote Proctoring website at:

<https://remoteproctoring.uwo.ca>.

## **Support Services**

Please visit the Science & Basic Medical Sciences Academic Advising webpage for information on adding/dropping courses, academic considerations for absences, appeals, exam conflicts, and many other academic-related matters: <https://www.uwo.ca/sci/counselling/>.

Students who are in emotional/mental distress should refer to Mental Health@Western (<https://uwo.ca/health/>) for a complete list of options about how to obtain help.

Western is committed to reducing incidents of gender-based and sexual violence and providing compassionate support to anyone who has gone through these traumatic events. If you have experienced sexual or gender-based violence (either recently or in the past), you will find information about support services for survivors, including emergency contacts at

[https://www.uwo.ca/health/student\\_support/survivor\\_support/get-help.html](https://www.uwo.ca/health/student_support/survivor_support/get-help.html).

To connect with a case manager or set up an appointment, please contact [support@uwo.ca](mailto:support@uwo.ca).

Please contact the course instructor if you require lecture or printed material in an alternate format or if any other arrangements are required to make this course more accessible to you. You may also wish to contact Accessible Education at

[http://academicsupport.uwo.ca/accessible\\_education/index.html](http://academicsupport.uwo.ca/accessible_education/index.html)

if you have any questions regarding accommodations.

Learning-skills counsellors at Learning Development and Success (<https://learning.uwo.ca>) are ready to help you improve your learning skills. They offer presentations on strategies for improving time management, multiple-choice exam preparation/writing, textbook reading, and more. Individual support is offered throughout the Fall/Winter terms in the drop-in Learning Help Centre, and year-round through individual counselling.

Additional student-run support services are offered by the USC, <https://westernusc.ca/services/>.