

(you are registered in one of the lab sessions and come only that time slot)

Constructive feedback is very valuable to us. Please do not hesitate to contact any one of the instructors if you have any comments or feedback on any aspect of Chem 2272F. We are always trying to improve the course so that we can improve your experience!

3. Course Syllabus, Schedule, Delivery Mode

Learning Outcomes: This course emphasizes the quantitative aspects of chemistry: classical measurements and instrumental methods of analysis. Upon successful completion of this course, the student is expected to demonstrate the ability to:

- ① Describe the basic principles and procedures to perform quantitative chemical analysis.
- ② Execute effective mathematical calculations necessary to achieve correct values in quantitative

Outline of Planned Lecture Topics

Section	Class Topic	Chapter in Harris
1	Administration, Introduction to Analytical Chemistry, Measurement Basics	0-2
2	Experimental Errors Statistics Quality Assurance Calibration Methods	3-5
3	Introduction to Titrations	7
4	Systematic Treatment of Equilibrium Acid-Base Equilibria Complexation Equilibria Acid-Base Titrations EDTA Titrations	8-12
5	Fundamentals of Electrochemistry Electrodes and Potentiometry Redox Titrations Electroanalytical Techniques	14-17
6	Fundamentals of Spectrophotometry Spectrophotometers Atomic Spectroscopy	18, 20, 21

In all of the topics, the primary focus is on the understanding of the concepts. Please try to garner a thorough, in-depth understanding of the material, because that is what allows success in chemistry. Accordingly tests and

All labs will be in ChB Room 004 (lower ground level in Chemistry Building).

Students who arrive unprepared or late for a lab will receive a zero for that lab. No credit will be given for the prelab exercises. Students are deemed late if they arrive after the lab doors have closed. Lab technicians and teaching assistants have the right to eject students from the lab.

Due to limited resources, students are asked to work in pairs or groups of three in the lab. However, each student is expected to learn all aspects of the experiments. Likewise, each student is expected to contribute equally with their highest level of skill and effort. In the event of unequal contributions, the TAs will require the students to work individually for the remaining of the lab.

Safety and Dress Code

Western is committed to workplace health and safety, and has strict safety regulations. Even your instructor has to follow them! Lab TAs and technical staff will remove students who, in their opinion, do not meet the safety requirements or are not prepared as described below. These students, and those who arrive late, will receive a zero for the entire experiment, and no credit will be given for the prelab exercise.

Eye Protection

Week of October 14	Fall Reading Week
Thursday October 24, 6:30 pm	Midterm Test (topic cutoff and room details TBA)
Thursday, October 24, 6:30 pm	First Achieve Adaptive Quiz due
Tuesday November 2	Last day to drop the course without academic penalty. If you drop the course on or before this date, it will remain on your academic record along with a WDN (withdrawn). If you drop the course after this date, it will result in an automatic F.
Friday December 6	Last day of Chem 2272 Lecture- All Achieve Adaptive Quizzes due

4. Course Materials

Chemistry 2272F Course Textbook is required: Quantitative Chemical Analysis, 10th Ed, Daniel C. Harris and Charles A. Lucy

The book, Achieve, lab manual, and lab notebook are available at the Western bookstore at the following link:

https://bookstore.uwo.ca/textbooksearch?campus=UWO&term=W2024A&courses%5B0%5D=001_UW/CHE2272F

Achieve Course Access Info:

- x Course URL: <https://achieve.macmillanlearning.com/courses/paad70>
- x Achieve Course ID: paad70

Chemistry 2272F Computer software Microsoft Excel for data analysis

Chemistry 2272F Laboratory Manual (2024 edition) is required

K o] š] } v • u Ç v } š μ • X ^ š μ v š • u μ • š Œ] v P š Z] • Ç Œ [

Lab Coat

For your protection, a proper lab coat is required. Designer lab coats, which are often sold as hospital scrubs or consultation coats, are not acceptable, because they are too short or do not offer sufficient protection to the upper body.

Safety Glasses

Safety glasses may also be purchased through the ChemClub. If you wear glasses, it is important that the safety glasses fit over them properly. The safety glasses should sit close to your forehead.

Use of electronic devices: Only basic scientific calculators are permitted on all tests and exams. All other electronic devices (cell phones, laptops, tablets, cameras, etc.) are prohibited. Students found

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 516-61-3800 or ext. 83800.

[Achieve Student Checklist](#) this is a 'goto HUB' for students

x

Students who fail to meet requirement #2 or #3 receive a course grade no greater than 40% (even if the calculated course grade is higher) and will not receive credit for the course.

6. Missed Course Components

General information about missed coursework

Students must familiarize themselves with the

Late lab report submissions The policy on late lab report submissions is detailed in the Laboratory Manual.

Missed Achieve Adaptive Quizzes

There are a total of 8 adaptive quizzes assigned throughout the course. To receive the participation mark of 5% (if chosen), students must complete a minimum of 12 quizzes. Academic considerations are built into this evaluation component, as students may decide if/when to miss a quiz. There will be no academic considerations for students that do not complete a minimum of 12 quizzes, but their final exam grade will simply be weighted to 5%.

Missed Midterm Exam

If you are unable to write the midterm test and are granted academic consideration, the weight of the midterm test will be shifted to the Final Exam. If you are not excused, you will receive a mark of ZERO.

Missed Final Exam

When you miss the Final Exam and their Academic Consideration has been granted, you will be allowed to write the Special Examination (the name given by the

the centrally administered email account provided to students will be their official university email address. It is the responsibility of the account holder to ensure that all messages received from the University at their official university address is attended to in a timely manner.

Scholastic offences

Find the Department of Chemistry at Western on Facebook and Twitter!

x Facebook: @ChemistryatWestern

x Twitter: @westernuchem