

## Syllabus for CHEM 211. QUANTITATIVE & ENVIRONMENTAL ANALYSIS

FALL 2023 MW 11-11:50am 1652 GILMAN

**INSTRUCTOR:** Professor Young-Jin Lee, Ph.D., 3759 Gilman, Phone: 4-1235, E-mail: [yjlee@iastate.edu](mailto:yjlee@iastate.edu)  
**OFFICE HOUR:** 3-4pm Mon/Wed. In-person or Webex. Other times welcome, e-mail for the appointment.  
Webex meeting room: <https://iastate.webex.com/meet/yjlee>

**LEARNING OBJECTIVES:** The students will learn key ideas about quantitative chemical analysis, including wet chemistry techniques, spectroscopy, separations and electrochemistry. The student shall be able to solve numerical problems that illustrate important concepts in analytical chemistry, including calculation of the composition of a sample, calculation of the pH of a solution, and the use of the Beer-Lambert Law. More detailed, module specific learning objectives are provided on Canvas.

**PREREQUISITES:** [CHEM 163](#) and [CHEM 163L](#), [CHEM 201](#) and [CHEM 201L](#); or credit or enrollment in [CHEM 178](#); and concurrent enrollment in [CHEM 211L](#)

### TEXTBOOK AND OTHER REQUIRED MATERIALS:

Exploring Chemical Analysis (Fifth Ed.) by Daniel C. Harris, Publisher: Freeman

NOTE: No need to separately purchase textbook or online homework. See below for Immediate Access.

Achieve Essentials for Exploring Chemical Analysis: Graded homework with feedback and VitalSource eBook. Included in ISU Immediate Access.

TopHat response system: Live class quiz.

<https://www.celt.iastate.edu/learning-teaching-technology/top-hat/>

**Please note that you must register Top Hat course with Join Code of 877371. Course URL: <https://app.tophat.com/e/877371>**

\* This course is enrolled in the **ISU Immediate Access Program**.

**What is Immediate Access?** Immediate Access is a collaborative affordability initiative between the ISU Book Store, faculty, and publishers. Students that are enrolled in an Immediate Access course will receive access to all required digital course materials the first day of class and at a reduced cost compared to the national average.

**What is the title and price of the required content for this course?** This information is posted in your student booklist through Access Plus, or it can be accessed by going to [www.isubookstore.com/textbooks](http://www.isubookstore.com/textbooks) and searching by the course for which you are enrolled.

**How is Immediate Access billed?** You will be automatically charged on your u-bill for this digital content.

**What if I drop the course?** Students who drop the course within the first 10 days of class will receive a refund on their u-bill. **You do not have to notify the bookstore if you drop the course.** This is an automated process.

**Can I opt out of Immediate Access?** Students may choose to opt out of the program. Opting out does not mean you are dropping the course. It simply means you are choosing not to receive the digital content from the bookstore and you must find another way to acquire it in order to complete required homework assignments. Achieve costs more if you purchase on your own. Students have within the first 10 days of class to opt out and receive a refund to their u-bill (5 days for courses 8 weeks or shorter). Instructions on how to opt out will be emailed shortly before classes start.

More details about immediate access materials can be found on the ISU bookstore page:

<https://www.isubookstore.com/immediate-access>. For further questions about Immediate Access, please email [immediateaccess@iastate.edu](mailto:immediateaccess@iastate.edu).

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**How do I access the required digital content?** There is a tool on the navigation menu of your Canvas course called **Immediate Access Course Materials**. You will receive an email shortly before classes start that will instruct you on how to access the required digital course materials. You may not be able to access the digital content until the first day of class.

**GRADING:** Total of 600 points.

Homework: through Access. Use the link at Canvas.	100 points
Quiz: during the class using TopHat quiz.	50 points
Exams: <b>Exam 1: Oct 4<sup>th</sup>, 2023, Mon</b>	100 points
<b>Exam 2: Nov 1<sup>st</sup>, 2023, Wed</b>	100 points
<b>Exam 3: Dec 6<sup>th</sup>, 2023, Wed</b>	100 points
<b>Final Exam (?? TBD): Dec 14, Thr, 7:30-9:30am</b>	150 points

### Grading and Exam Policy

- **No make-up exams.** If you miss an exam due to serious illness, you need to bring a signed physician's note and the average of your other scores will be used. Other excuses are not allowed without pre-approval.
- Requests for re-grading should be made to the professor or TA within **3 business days** after the date the exam has been handed back to the class.
- For the three mid-term exams, more than half the exam questions will be from homework or quiz.
- Final exam is multiple choice ACS exam and comprehensive covering the entire content. If you miss the final exam, you will fail the course. Consult to the instructor in advance in extenuating circumstances.
- There is homework for every chapter through *Achieve* due one week after each chapter.
- Maximum homework score is 100 out of total possible score of >120. Extra score above 100 is not counted for the grading purpose, but you are encouraged to continue for your learning and exam preparation.
- There will be no time extension or make-up HW, except extenuating circumstances.
- There will be class quiz for almost every lecture. No make-up or accommodation for missed quiz, except extenuating circumstances. It is your responsibility to ensure your device works properly.
- Each quiz score is 1-2 point and maximum quiz score is 50 point out of total possible score of ~60 point. Extra score above 50 is not counted for the grading purpose.
- **Bring your calculator to the class.** Some quizzes will need a calculator.

### **Other notes:**

- Read Chapter 2 before performing your first Chemistry 211L laboratory experiment.
- The instructor reserves the right to make changes to the syllabus and schedule, and will notify students of those changes during the class and through Canvas.
- All lecture notes and exam grades are available through Canvas. <https://canvas.iastate.edu/>
- Students are expected to read the chapter before and/or right after the class. Attending lecture or reading lecture notes does not replace reading the textbook. Relevant chapters in the textbook are indicated in the course schedule.
- Students creating disturbances that interfere with the conduct of the class or the learning of others will be asked to leave the lecture room.
- Ask questions any time but expect up to 48 hours to respond to e-mail questions.
- Please find a separate course schedule for the detailed schedule of course.

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### Academic Dishonesty

The class will follow Iowa State University's policy on academic dishonesty. Anyone suspected of academic dishonesty will be reported to the [Dean of Students Office](#).

### Accessibility Statement

Iowa State University is committed to assuring that all educational activities are free from discrimination and harassment based on disability status. Students requesting accommodations for a documented disability are required to work directly with staff in Student Accessibility Services (SAS) to establish eligibility and learn about related processes before accommodations will be identified. After eligibility is established, SAS staff will create and issue a Notification Letter for each course listing approved reasonable accommodations. This document will be made available to the student and instructor either electronically or in hard-copy every semester. Students and instructors are encouraged to review contents of the Notification Letters as early in the semester as possible to identify a specific, timely plan to deliver/receive the indicated accommodations. Reasonable accommodations are not retroactive in nature and are not intended to be an unfair advantage. Additional information or assistance is available online at [www.sas.dso.iastate.edu](http://www.sas.dso.iastate.edu), by contacting SAS staff by email at [accessibility@iastate.edu](mailto:accessibility@iastate.edu), or by calling 515-294-7220. Student Accessibility Services is a unit in the Dean of Students Office located at 1076 Student Services Building.

### Discrimination and Harassment

Iowa State University does not discriminate on the basis of race, color, age, ethnicity, religion, national origin, pregnancy, sexual orientation, gender identity, genetic information, sex, marital status, disability, or status as a U.S. Veteran. Inquiries regarding non-discrimination policies may be directed to Office of Equal Opportunity, 3410 Beardshear Hall, 515 Morrill Road, Ames, Iowa 50011, Tel. 515-294-7612, Hotline 515-294-1222, email [eooffice@iastate.edu](mailto:eooffice@iastate.edu)

### Religious Accommodation

Iowa State University welcomes diversity of religious beliefs and practices, recognizing the contributions differing experiences and viewpoints can bring to the community. There may be times when an academic requirement conflicts with religious observances and practices. If that happens, students may request the reasonable accommodation for religious practices. In all cases, you must put your request in writing. The instructor will review the situation in an effort to provide a reasonable accommodation when possible to do so without fundamentally altering a course. For students, you should first discuss the conflict and your requested accommodation with your professor at the earliest possible time. You or your instructor may also seek assistance from the [Dean of Students Office](#) at 515-294-1020 or the [Office of Equal Opportunity](#) at 515-294-7612.

### Contact Information for Academic Issues

If you are experiencing, or have experienced, a problem with any of the above statements, email [academicissues@iastate.edu](mailto:academicissues@iastate.edu)

### Freedom of Speech

Iowa State University supports and upholds the First Amendment protection of freedom of speech and the principle of academic freedom in order to foster a learning environment where open inquiry and the vigorous debate of a diversity of ideas are encouraged. Students will not be penalized for the content or viewpoints of their speech as long as student expression in a class context is germane to the subject matter of the class and conveyed in an appropriate manner.