

CHEM 108 - GENERAL CHEMISTRY Laboratory
Section 003; Spring 2021

Instructor: Dr. F. Gregg McIntosh

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Office Location: 109F Sims Hall

Lecture: This course is a 100% online course

Lecture Meeting Times: N/A

Course Credit Hours: 2

Office Hours: By appointment via Blackboard or Zoom

Time Commitment: This is a fully online course, so you must manage your time wisely. You should check Blackboard and the Labflow web site often to ensure that you are keeping up with the assignments. There will typically be two assignments per week, one consisting of video content and a prelab assignment, and laboratory report. Late assignments will be penalized, so do not wait until the due dates to begin working.

Questions: If you have a question that other learners may also have, please post your question on the **Ask a Question** forum in the **Discussions** tab. For private communication, please email me directly. For questions involving calculations, include a photo of your work to better assist you as promptly as possible.

Requirements for Communicating Through Email: You are required to use your **Winthrop University email address** when communicating with classmates or me through email. All communications about this course will be sent by me to your Winthrop email address and you are required to use your Winthrop email address when sending emails to me. When sending me an email, please use "**CHEM 108**" in the subject line. If you use another email account, it is possible that your email will go to my junk folder.

Expected Response Time: I will respond to emails within one-two business day. If you send an email over the weekend and do not get a reply over the weekend, I will respond to all weekend emails first thing Monday morning. If you do not get a response within one business day, please email me again. For faster responses, include as much detail as possible, such as the exact problem you are working on and a picture of your work.

Attendance/participation: You are expected to actively participate in the course, and keep up with all announcements made in Blackboard or sent via email. Participation includes replying to emails requesting a response, completing online assignments, and contacting the instructor with any questions or concerns. Absences include not responding to instructor requests and failure to complete online assignments.

Online learning: Any student enrolled in courses at Winthrop regardless of modality (traditional in-person, online, hybrid, ...) is entitled access to all campus resources. These resources include, but are not limited to, admissions counseling, recreational facilities, and health, library, and academic services. Questions regarding access to these resources should be directed to the assigned academic advisor.

Masking Expectations: Winthrop requires that all students adhere to safety practices that will minimize the transmission of COVID-19 within the campus community. Accordingly, students are expected to engage in social distancing and wear a cloth face mask while on campus. Failure to comply with this requirement in the classroom will result in dismissal from the current class meeting. Repeated violations will be reported to the Dean of Students as a violation of the Student Conduct Code. Students with conditions that prohibit the wearing of a face mask should discuss this with their instructor and/or contact the Office of Accessibility to

arrange appropriate accommodations.

Syllabus Changes: This syllabus is a working document. It will be changed and corrected as needed. I will send an email notifying you of any major changes to this syllabus.

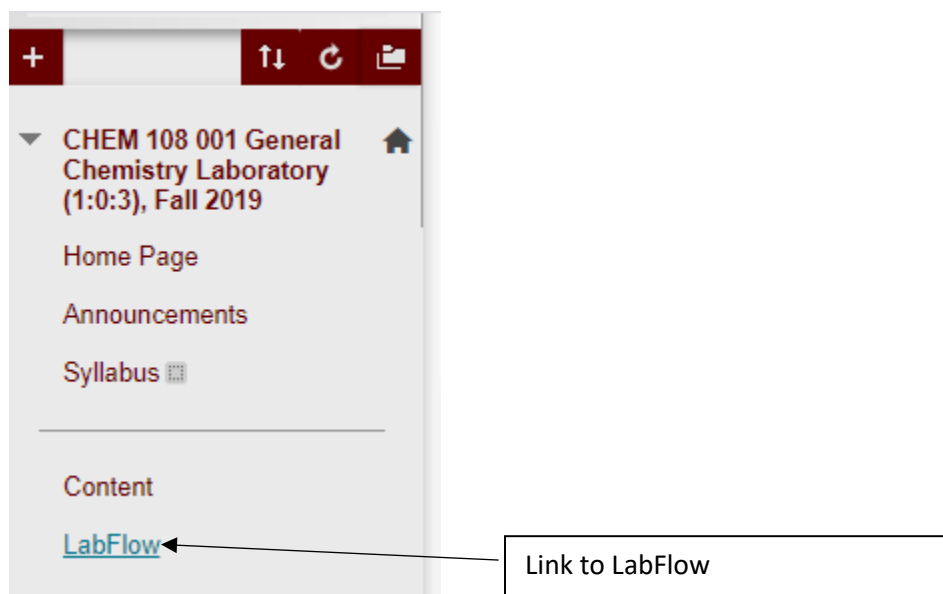
Required Materials

- LabFlow ISBN: 978-0-9600627-0-6
- Scientific Calculator (It does not have to be a programmable/graphing calculator)
- Computer with webcam and internet access
- WiFi access

Recommended Materials

- A textbook is useful to have as a reference resource, but is not required. If you do not have a textbook from CHEM 105, you can use the OpenStax textbook at <https://openstax.org/details/books/chemistry-atoms-first-2e>

LabFlow



Link to take you directly to the LabFlow website.

When creating your LabFlow account, use your Winthrop email address and you will need the access code that you purchased.

Course Objectives and Student Learning Outcomes: Students completing this course successfully will:

- Be introduced to various laboratory and instrumental techniques commonly used in chemical analysis
- Gain experience in analysis of experimental data and techniques
- Learn to organize data in graphical and tabular formats
- Learn to present experimental results and conclusions in a basic report format

Class Preparation:

We will complete 12 labs this semester, with 10 prelab assignments and laboratory reports. All labs will be completed online through the LabFlow website. Most labs will run for one week, but several labs will run over a two week period. In order to be successful in CHEM 108, I recommend the following:

- Read the lab assignment including all of the background information. If you need additional background reading, use your textbook.
- Watch the required videos in order to help with your understanding of the lab material and help prepare you for the prelab quiz and completion of the lab report.
- Work example problems so that you understand the math.
- Complete all practice problems, even those that are not graded.
- **Do not fall behind. Late work will be penalized so begin each assignment early so that you may request assistance if needed.**

Grading:

1. **LabFlow Safety Quiz (100 points):** Lab safety quiz is completed in LabFlow. You will have 2 attempts. Late submissions will be penalized at 5% per day late.
2. **LabFlow Prelab Quizzes (10 points each, ~100 total points):** Each lab will have a prelab quiz worth 10 points each. See schedule below for due dates. You will have 2 attempts for each quiz, unless otherwise noted. Late submissions will be penalized at 5% per day late.
3. **Lab Reports (100 points each, ~1000 points total):** Lab reports will be completed in LabFlow. After thoroughly reading the lab with background information, watching the corresponding video(s) and completing the prelab quiz, you will complete your lab report online in LabFlow. Since this is a 100% online lab, you will have to request that the lab report give you experimental data (provisional data) to use while completing the lab. Directions for selecting provisional data:
<https://labflow.freshdesk.com/support/solutions/articles/43000583052-reports-using-provisional-data>

This experiment is set up to be completed completely online, or in the lab. Select how you are completing the report before beginning.

Are you completing this experiment online?

Yes

NEXT

This experiment is set up to be completed completely online, or in the lab. Select how you are completing the report before beginning.

Are you completing this experiment online?

Yes

If you are completing this report online, select the Provisional Data option and you will be given data to complete the lab.

REQUEST PROVISIONAL DATA

TRY AGAIN

4. **Lab Exams (150 points each, 300 points total):** We will have two exams in this course. These exams will focus on the concepts and math involved in each lab. The midterm exam will be on 10/8, and the final on 12/8. The exam will be administered online using Respondus, and you will have two days from the posted date to complete the attempt. You will need a computer with internet and a web camera for the exams.
5. There will be a Respondus 'Quiz' posted at the beginning of the semester so that you may ensure that your computer is set up properly to use the Respondus software. This assignment will count as a 10/10 for a quiz grade.
6. Letter grades will be assigned as follows:
 - A : 90% → 100% : 1440+ points
 - B : 80% → 90% : 1280-1439 points
 - C : 70% → 80% : 1120-1279 points
 - D : 60% → 70% : 960-1119 points
 - F : <60% : ≤959 points

7. You should carefully read the Winthrop University Student Conduct Code printed in the Winthrop University Student Handbook. As noted in the Student Conduct Code: Responsibility for good conduct rests with students as adult individuals. This policy on student academic misconduct is outlined in the Student Conduct Code Academic Misconduct Policy in the online *Student Handbook* <http://www.winthrop.edu/uploadedFiles/studentconduct/StudentHandbook.pdf>

Any student caught violating the Conduct Code will receive a zero for the assignment and be reported to the Dean of Students.

Total Possible Points (may be adjusted as necessary)

Assignment	Total Possible Points
Safety Quiz	100
Prelab Quizzes	110
Lab Reports	1000
Midterm Exam	150
Final Exam	150
Respondus 'Quiz'	10
Meet and Greet 'Quiz'	10
Additional Points	70
Total possible points	1600

Course Withdraw: Wednesday, March 10, 2021 is the last day to withdraw from a full semester course with an automatic N grade issued. *Students may not withdraw from a course after this date without documented extenuating circumstances* as determined by the University.

Students with Disabilities/Need of Accommodations for Access: Winthrop University is committed to providing access to education. If you have a condition which may adversely impact your ability to access academics and/or campus life, and you require specific accommodations to complete this course, contact the Office of Accessibility (OA) at 803-323-3290, or, accessibility@winthrop.edu, as early as possible to discuss your concerns.

University-Level Competencies: The goals of this course align with the ***University Level Competency #1-*** "Winthrop graduates think critically and solve problems" and ***University Level Competency #4-*** "Winthrop graduates communicate effectively."

University-Level Competencies: Competency 1: Winthrop graduates think critically and solve problems.

Winthrop University graduates reason logically, evaluate and use evidence, and solve problems. They seek out and assess relevant information from multiple viewpoints to form well-reasoned conclusions. Winthrop graduates consider the full context and consequences of their decisions and continually reexamine their own critical thinking process, including the strengths and weaknesses of their arguments. Throughout this course, students will work on developing their critical thinking and problem solving skills. Students will use their chemistry knowledge to investigate how chemistry is involved in our daily lives.

University-Level Competencies: Competency 4: Winthrop graduates communicate effectively.

Winthrop University graduates communicate in a manner appropriate to the subject, occasion, and audience. They create texts -including but not limited to written, oral, and visual presentations-that convey content effectively. Mindful of their voice and the impact of their communication, Winthrop graduates successfully express and exchange ideas.

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This is a tentative schedule. It will be adjusted as necessary.			
Week	Open/Close Dates	Lab Topic	Assignment Due dates All assignments are due by 11:59 pm on the specified due date
Week 1	1/11-1/17	Safety Videos and Quiz	Safety quiz due 1/17
		Chemistry Glassware and Measurement Chemistry Math and Labware Video and Quiz	Prelab quiz due 1/15 Lab report due 1/17
Week 2	1/18-1/24	Introduction to Laboratory Measurements	Prelab quiz due 1/21 Lab report due 1/24
Week 3	1/25-1/31	Determination of Density	Prelab quiz due 1/28 Lab report due 1/31
Week 4 Week 5	2/01-2/14	Chemical reactions and Equations	Prelab quiz due 2/07 Lab report due 2/14
Week 6	2/15-2/21	Soluble & Insoluble Salts	Prelab quiz due 2/21 No lab report
Week 7	2/22-2/28	Qualitative Analysis	Prelab quiz due 2/25 Lab report due 2/28
Week 8	2/29-3/06	Midterm Exam	
Week 7 Week 9	3/01-3/14	Acids, Bases, Buffers, pH	Prelab quiz due 3/07 Lab report due 3/14
Week 10	3/15-3/21	Titration: Determining the Concentration of an Acid	Prelab quiz due 3/18 Lab report due 3/21
Week 11	3/22-3/28	Energy and Specific Heat	Prelab quiz due 3/25 Lab report due 3/28
Week 12 Week 13	3/29-4/11	Chemistry of Copper and Percent Yield	Prelab quiz due 4/04 Lab report due 4/11
Week 14 Week 15	4/12-4/25	Beer's Law and Spectrophotometry	Prelab quiz due 4/18 Lab report due 4/25
Finals Week	4/28-5/01	Final Exam	

