

CHEM 108 - GENERAL CHEMISTRY Laboratory
Section 004 ; Spring 2021

Instructor: Dr. Dammann

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Office Location: Sims 109A

Lecture: This is a hybrid course with 100% online labs (and *three F2F scheduled meetings)

Lecture Meeting Times: *Wednesday 2:00 pm to 3:15 pm on scheduled in-class meeting dates

Course Credit Hours: 2

Virtual Office Hours: Tuesdays 2:30 pm – 3:30 pm and Wednesdays 3:15 pm to 3:45 pm

Time Commitment: This course requires weekly participation, so be sure to manage your time wisely. In order to keep up with the assignments, please check Blackboard, LabFlow and your Winthrop email often. LabFlow provides online resources (content pdfs and videos) and online assessments (prelab quiz and lab report) for each assignment. In addition to weekly LabFlow assignments, you will also have some scheduled Blackboard quizzes. For each assignment, there are start and stop dates, so be sure to start each assignment before the due date to avoid a late assignment penalty.

Questions: If you have a question that other learners may also have, post your question on the **Ask a Question** page in Blackboard. If you need assistance and prefer private communication, please send me an email using your Winthrop email address.

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 days. 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. In your emails, please include the details of the problem you are experiencing.

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

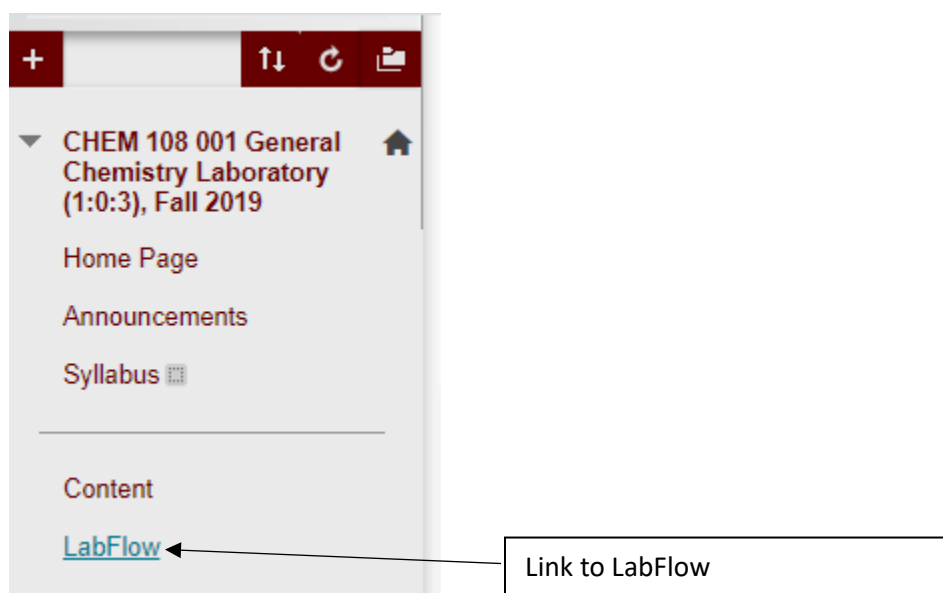
Required Materials

- LabFlow (ISBN: 978-0-9600627-0-6) **Purchase the LabFlow access code by 1-11-21** (available at Winthrop bookstore).
- Scientific Calculator (It does not have to be a programmable 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 can be accessed in Blackboard. Click on the LabFlow link in the left panel of your CHEM 108 course.



The LabFlow link will take you directly to the LabFlow website (www.labflow.edu).

When creating your LabFlow account, use your Winthrop email address and you will need the LabFlow access code that you purchased. Student Instructions for creating a LabFlow account and enrolling in the LabFlow CHEM 108 course are accessible in Blackboard Content. Your LabFlow CHEM 108 enrollment code is 004.

Course Objectives and Student Learning Outcomes: Students completing this course successfully will be introduced to some laboratory and instrumental techniques that scientists use in chemical analysis, learn to organize data in graphical and table formats, gain experience in analysis of experimental data & techniques, and learn to present experimental results and conclusions in a basic lab report format.

Class Preparation:

We will complete 12 LabFlow labs this semester. 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. There will be 11 required LabFlow Pre-lab Quizzes, 10 required LabFlow Lab Reports, one LabFlow Safety Quiz and five required Blackboard assignments. In order to be successful in CHEM 108, be sure to do the following each week:

- Read the LabFlow lab Experiment PDF, including all of the background information. If you need additional background reading, use your CHEM 105 textbook or the OpenStax textbook at <https://openstax.org/details/books/chemistry-atoms-first-2e>
- Watch the required LabFlow videos which will help with your understanding of the lab material and help prepare you for the Pre-lab Quiz and completion of the Lab Report.
- Work examples and practice problems accessible in Blackboard Content, in the LabFlow Experiment PDFs and in the LabFlow math videos, so that you understand the math.
- **Do not fall behind.** To avoid a late assignment penalty, be sure to begin each assignment early.
- If you have any questions, you may email me and request assistance, if needed.

Grading:

1. **LabFlow Safety Quiz (100 points):** The Safety Quiz is completed in LabFlow. You will have 2 attempts.
2. **LabFlow Pre-lab Quizzes (10 points each, 110 total points):** Eleven required Pre-lab quizzes will be completed in LabFlow. Each required LabFlow Pre-lab Quiz is worth 10 points. See the course schedule of due dates for LabFlow Pre-lab Quizzes, Safety Quiz and Lab Reports on the last page of this syllabus. You will have 2 attempts for each LabFlow Pre-lab Quiz, unless otherwise specified.
3. **Lab Reports (100 points each, 1000 points total):** Ten required Lab Reports will be completed in LabFlow. After thoroughly reading the LabFlow Experiment PDF with background information, watching the corresponding video(s) and completing the Pre-lab 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 a Respondus exam (given during Week 8) and the **final exam** will be given on Thursday April 29, 2021 in Sims 105, unless otherwise noted. For CHEM 108-004 exams administered online, you will need a computer with internet, web camera and Respondus LockDown Browser and Monitor in order to take the exams.
5. **Blackboard Assignments (30 points total):** There will be five required Blackboard Assignments. Due dates are posted on the course schedule page.
6. Letter grades will be assigned as follows:
 - A 1386-1540 points
 - B 1232-1385 points
 - C 1078-1231 points
 - D 924-1077 points
 - F less than 924 points

Student Conduct Code: 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

Assignment	Total Possible Points
Safety Quiz	100
Pre-lab Quizzes	110
Lab Reports	1000
Midterm Exam	150
Final Exam	150
Blackboard Assignments	30
Total possible points	1540

Course Withdraw: Thursday 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 are a student with a disability (including mental health concerns, chronic or temporary medical conditions, learning disabilities, etc.) and you anticipate or experience academic barriers due to the condition, please contact The Office of Accessibility (OA) for information on accommodations, registration, and procedures. After receiving approval for accommodations through OA, please make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely manner.* The Office of Accessibility (OA) is located in Bancroft G04. Please contact OA at 803-323-3290, or accessibility@winthrop.edu, as soon 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.

CHEM 108 - GENERAL CHEMISTRY Laboratory Section 004 Spring 2021***This is a tentative schedule. It will change 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
		Blackboard Assignment 1	BB Syllabus Quiz due 1/14
		Chemistry Glassware and Measurement	Prelab quiz due 1/17 Lab report due 1/18
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	Blackboard Assignment 2 Determination of Density	BB Sig Figs Quiz due 1/28 Prelab quiz due 1/28 Lab report due 1/31
Week 4 Week 5	2/1-2/14	Blackboard Assignment 3 Chemical Reactions and Equations	BB Respondus Practice Quiz due 2/5 Prelab quiz due 2/7 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
		Review for Midterm Exam (*in Sims 105)	*In-class 2/24/21 (W) 2:00 pm
Week 8	3/1-3/6	Midterm Exam	
Week 8 Week 9	3/1-3/14	Blackboard Assignment 4 Acids, Bases, Buffers, pH	BB Acid-Base Rxns Quiz due 3/6 Prelab quiz due 3/7 Lab report due 3/14
Week 10	3/15-3/21	Titration: Determining Concentration of Acid	Prelab quiz due 3/19 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	Blackboard Assignment 5 Chemistry of Copper and Percent Yield	BB Redox Rxns Quiz due 4/8 Prelab quiz due 4/5 Lab report due 4/11
Week 14 Week 15	4/12-4/25	Beer's Law and Spectrophotometry Review for Final Exam (*in Sims 105)	Prelab quiz due 4/19 Lab report due 4/25 *In-class 4/21/21 (W) 2:00 pm
Finals Week	4/29/21	Final Exam (*in Sims 105)	*Thursday 3:00 pm – 5:30 pm