

CHEM 1006 - Elementary Chemistry II

Winter 2023

Instructor: Alyssa Nause

CHEM 1006 has returned to in-person lectures, tutorials and labs for the Winter 2023 term

Lecture Hours

Lectures: Tuesdays and Thursdays, 6:05PM to 7:25PM, **AT 102**

Tutorials: Thursdays, 7:35PM to 8:25PM EST, **AT 102**

Contact

Email: alyssa.nause@carleton.ca

Email is usually easiest for everyone, and often the fastest contact.

Please use your Carleton email account to make sure I realize who you are. Avoid leaving questions/concerns to the last minute though; it may take *a full day* to receive a reply.

Office Hours: TBD (see course Brightspace page for upcoming in-person and/or online office hour times)

Check Brightspace often for updates, announcements and course material.

Textbook

Recommended: *CHEMISTRY* – Fourth Canadian Edition by Olmsted, Williams and Burk, published by Wiley, with a two-term access code to WileyPlus, a homework management system we will be using.

The book is available from Carleton's bookstore, or see more information in the "Textbook Choices for CHEM 1005" file on the course Brightspace page.

Examination Dates

- Midterm Test 1: Thursday, February 16th; **online, during lecture time**
- Midterm Test 2: Tuesday, March 21st; **online, during lecture time**
- Final Exam: online, date and time to be scheduled by Examination Services
 - **The Final Exam Schedule should be released on/near February 17th***

**April 2023 exam period is April 15th through 27th, including weekends (keep this in mind if making any travel plans for the end of the term...maybe wait until the schedule is released to finalize them).*

A [full list of important dates](#) is available on the University Calendar website. Please note that the academic withdrawal dates have changed recently. Consult the Calendar website for the most updated information: <https://calendar.carleton.ca/academicyear>

Textbook (same as CHEM 1005 last term)

Recommended: *CHEMISTRY* – Fourth Canadian Edition by Olmsted, Williams and Burk, published by Wiley, with a two-term access code to WileyPlus, a homework management system we will be using. The book is available from Carleton’s bookstore, or see more information in the “Textbook Choices for CHEM 1006” file on the course Brightspace page.

If you were in CHEM 1005 (or CHEM 1001) in the Fall 2022 term, your WileyPlus Access Code is still active!

Grades

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| Laboratory 30% * |
| Online Assignments (WileyPlus Homework): 10% |
| Mid-term Test (x2, 15% ea.) 30% ** |
| Final Exam 30% *** |
| <i>Bonus for using Adaptive Practice (also in WileyPlus): up to 5%</i> |

* All laboratory experiments **MUST** be completed to pass the course. If lab grade is “incomplete”, you will receive a course grade of F, regardless of your lecture-based grade.

** If you miss a midterm test for any reason, the weight will be transferred to your final exam:

- 1 midterm missed = Final Exam weighted to 45%
- 2 midterms missed = Final Exam weighted to 60%

*** Per university policy, attempting the Final Exam is also a required component for the course to be considered completed and a passing grade to be permitted.

Grades for each component of the course will be released only through Brightspace.

Laboratory

The lab portion of this course is separate from the lecture portion. All components of the lab material must be completed to complete the entire course. **If a lab grade of “incomplete” is given at the end of the term, the resulting course grade is an F, regardless of your grade for the lecture portion.**

All labs will be live and in-person for CHEM 1006 in the Winter 2023 term.

Labs will begin the week of January 16th. Read and follow the instructions provided by your Lab Coordinator (Mastaneh Azad or Natalie Mesnic) on the course Brightspace page (*including the tasks that must be completed before your first in-person session!*).

Due dates for lab components vary by assigned lab group; all due dates will be posted on Brightspace.

Assignments (WileyPlus and Adaptive Practice)

Online WileyPlus Homework Assignments will be posted for each topic. Assignments will be split into Chapters and sub-chapters where appropriate to align with our lecture Topics. Each Topic's assignment(s) will be equally weighted. WileyPlus Assignments may be submitted up to 7 days late for half-marks.* Past 7 days, late assignments do not earn grades but are available for practice.

* *The Topic 4 assignment(s) are exempt from this policy as their due date is the last day of classes.*

Due Dates for WileyPlus Homework Assignments (also posted on Brightspace):

- Topic 1 (Chapters 8, 9): January 27th
- Topic 2 (Chapter 13): February 17th
- Topic 3 (Chapters 15, 16): March 24th
- Topic 4 (Chapters 3, 12): April 12th

Bonus marks can be earned with online bonus assignments (Adaptive Assignments in WileyPlus). Each Topic's bonus assignment will be equally weighted. Each assignment has a minimum number of questions that must be attempted before bonus grades start to be earned (as indicated on each assignment's launch page). Bonus assignments are not eligible for any marks when submitted late.

Due Dates for Bonus Assignments (also posted on Brightspace):

- Topic 1 (Chapters 8, 9): February 17th
- Topic 2 (Chapter 13): February 17th
- Topic 3 (Chapters 15, 16): March 24th
- Topic 4 (Chapters 3, 12): April 12th

Note that all Homework and Bonus assignments are available from the first day of the term and can be started and resumed at any time up to their due dates/permitted late dates/practice access dates.

Practice Questions

Lists of good practice questions to complete from your textbook will be posted on Brightspace (for both the Fourth and Third Editions of the textbook), with additional practice questions also set up through WileyPlus.

I will also provide some practice questions separate from those in your textbook and WileyPlus, some of which will be reviewed during the tutorial sessions.

Midterm Tests

The online midterm tests will be marked and manually reviewed, and the grades released approximately two weeks after the test was written. Any concerns regarding the returned grades/online grading must be reported to me *before* the next test.

Remember: If you miss one midterm, your final exam will make up 45% of your course grade; missing both midterms makes the final exam 60% of your course grade.

Academic Accommodation or Special Arrangements

Requests for Academic Accommodation

You may need special arrangements to meet your academic obligations during the term. For all types of accommodation requests, the processes can be found here: <https://students.carleton.ca/course-outline/>

Self-Declaration for Academic Considerations

When required, follow the instructions linked here to complete and submit this form if you are experiencing short-term incapacitation and are temporarily unable to meet your academic obligations: <https://carleton.ca/registrar/wp-content/uploads/self-declaration.pdf>

Syllabus

Approximate order of topics below, subject to change as time permits.

Topic 1: Solution Chemistry (*Textbook Chapters 8 and 9*)

- Concentrations
- Solubility Trends
- Aqueous Solutions and Solution Properties

Topic 2: Kinetics (*Textbook Chapter 13*)

- Reaction Mechanisms
- Rates of Reactions
- Effects and Applications

Topic 3: Acids and Bases (*Textbook Chapters 15 and 16*)

- Recognizing Acids and Bases
- pH scale and Strength of Acids and Bases
- Buffers and Acid-Base Titrations

Topic 4: Thermodynamics (*Textbook Chapters 3 and 12*)

- Types of Energy
- Laws of Thermodynamics
- Enthalpy, Enthalpy, and Spontaneity