

General Chemistry Laboratory 104B Syllabus

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General Information

Welcome to General Chemistry II lab! This course will provide a foundation for any future science course you plan to take (biochemistry, organic chemistry, molecular biology etc...). Understanding the fundamentals of chemistry is essential for any scientific discipline and the field of medicine. Topics include aqueous solutions and solubility; the electronic structure of atoms and molecules; chemical reactions and energy; quantitative analysis and intermolecular forces. General chemistry is a **quantitative course** and it is expected you have strong math skills. A list of resources is given below math skill building.

<https://www.khanacademy.org/science/chemistry>

<https://www.khanacademy.org/math/math1/math1-units/math1-intro-to-dimensional-analysis/v/interpreting-units-in-formulas>

<https://www.khanacademy.org/math/algebra2/exponential-and-logarithmic-functions/introduction-to-logarithms/v/logarithms>

Laboratory

You will attend laboratory twice a week during your assigned lab period Monday and Thursday. The class begins with a short lab lecture (~20-30 minutes) held in Room 180, followed by lab work in Room 182. While in the lab, you will be supervised by a teaching assistant and Dr. Watkins. Most students say that lab requires an additional 6 hours per week (outside of the lab time) to write reports and to prepare for the upcoming experiment.

Learning Objectives

Apply knowledge of intermolecular forces to bioplastics.

Synthesize and characterize bioplastics.

Determine the kinetics of ground water remediation using indigo carmine as a mock contaminant

Link quantitative analysis methods to experiments in the laboratory (such as complexometric titrations and acid-base titration).

Synthesize and characterize gold nanoparticles using spectrophotometry.

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Office Hours

TA office hours will be posted on Moodle at the start of the semester.

You can also email me questions , lhwatkins@brynmawr.edu . Typical response time is 24 hours.

Required materials

Lab coat and safety goggles (even if you wear regular glasses). All are available at the BMC bookstore. We will use an electronic lab notebook. Please check your email on the first day of classes for an invitation to the electronic lab notebook platform.

Moodle

We use **Moodle** extensively in this course. The current lab schedule, laboratory manuals, supplementary materials, and laboratory class data sets will also be available on this site.

Grades

Your laboratory work accounts for one-third of your overall Ch 103 course grade (33%). Your graded laboratory work will consist of prelabs, electronic data sheets and written reports.

Prelab in your hardcopy lab notebook

Prelabs must be written in your electronic lab notebook prior to the beginning of class. **A copy and paste prelab from the lab manual will receive 0/10 points for the prelab portion of the lab report.**

Lab Reports

Reports are due twenty four hours (24 hours) after your lab section ends. For example, if you are in Monday's lab section A that ends at 11:20 am your lab report is due Tuesday by 11:20 am. The lab report includes all sections listed under the "Writing your Report" section of each lab manual. Occasionally, you will turn in report sheets during lab instead of writing a formal lab report.

Absences/Late Work

You are expected to attend each laboratory fully prepared to complete the day's experiment Monday and Thursday for your registered lab time. There are no make-up labs and you must attend the lab period you are registered for on bionic.

Late Work Policy

Any lab work (including prelabs and lab reports) turned in late is subject to a late penalty of 50%/24 hours. For example, if the original grade of a report was 100% and it is turned in a day late (24 hours) the grade after applying the late penalty is an 50%. Thus, it is imperative to turn in all lab work on time, otherwise your lab grade will be significantly affected.

Late Lab Pass

Everyone gets a one-time only, no questions asked opportunity to turn in a lab report a day late.

For example, if the lab was due Tuesday at 11:20 am you have until Wednesday at 11:20 am to turn in the report. Simply email your TA and myself that you will be using your late pass after the end of your lab period.

Policies on Graded Work

Any work that you turn in for grading is subject to BMC's honor code. We expect the work to be yours and not that done in collaboration with another student, copied from an old lab report, *etc.* For experiments done with a partner, your collaboration should end when the experiment is completed; you are expected to write your reports individually. You are not to use lab reports from previous summers to write your lab report. The use of previous summer lab reports is strictly prohibited. Obtaining old exams from the previous summer lecture course is also prohibited and a violation of the honor code.

Please read the honor code BEFORE starting this course.

<https://www.brynmawr.edu/deans/academic-and-community-integrity>

There is no re-grading of lab reports for this course. Please do not waste your TA's valuable time by asking them to re-grade because the answer will be no.

NOTE: Bryn Mawr College is committed to providing equal access to students with a documented disability. Students needing academic accommodations for a disability must first register with Access Services. Students can call 610-526-7516 to make an appointment with the Director of Access Services, Deb Alder, or email her at dalder@brynmawr.edu to begin this confidential process. Once registered, students should schedule an appointment with the professor as early in the semester as possible to share the verification form and make appropriate arrangements. Please note that accommodations are not retroactive and require advance notice to implement. More information can be obtained at the Access Services website. (<http://www.brynmawr.edu/access-services/>)

Title IX

Bryn Mawr/Haverford College is committed to fostering a safe and inclusive living and learning environment where all can feel secure and free from harassment. All forms of sexual misconduct, including sexual assault, sexual harassment, stalking, domestic violence, and dating violence are violations of Bryn Mawr/Haverford's policies, whether they occur on or off campus. Bryn Mawr/Haverford faculty are committed to helping to create a safe learning environment for all students and for the College community as a whole. If you have experienced any form of gender or sex- based discrimination, harassment, or violence, know that help and support are available. Staff members are trained to support students in navigating campus life, accessing health and counseling services, providing academic and housing accommodations, and more. The College strongly encourages all students to report any incidents of sexual misconduct. Please be aware that all Bryn Mawr/Haverford employees (other than those designated as confidential resources such as counselors, clergy, and healthcare providers) are required to report information about such discrimination and harassment to the Bi-College Title IX Coordinator. Information about the College's Sexual Misconduct policy, reporting options, and a list of campus and local resources can be found the College's website.

