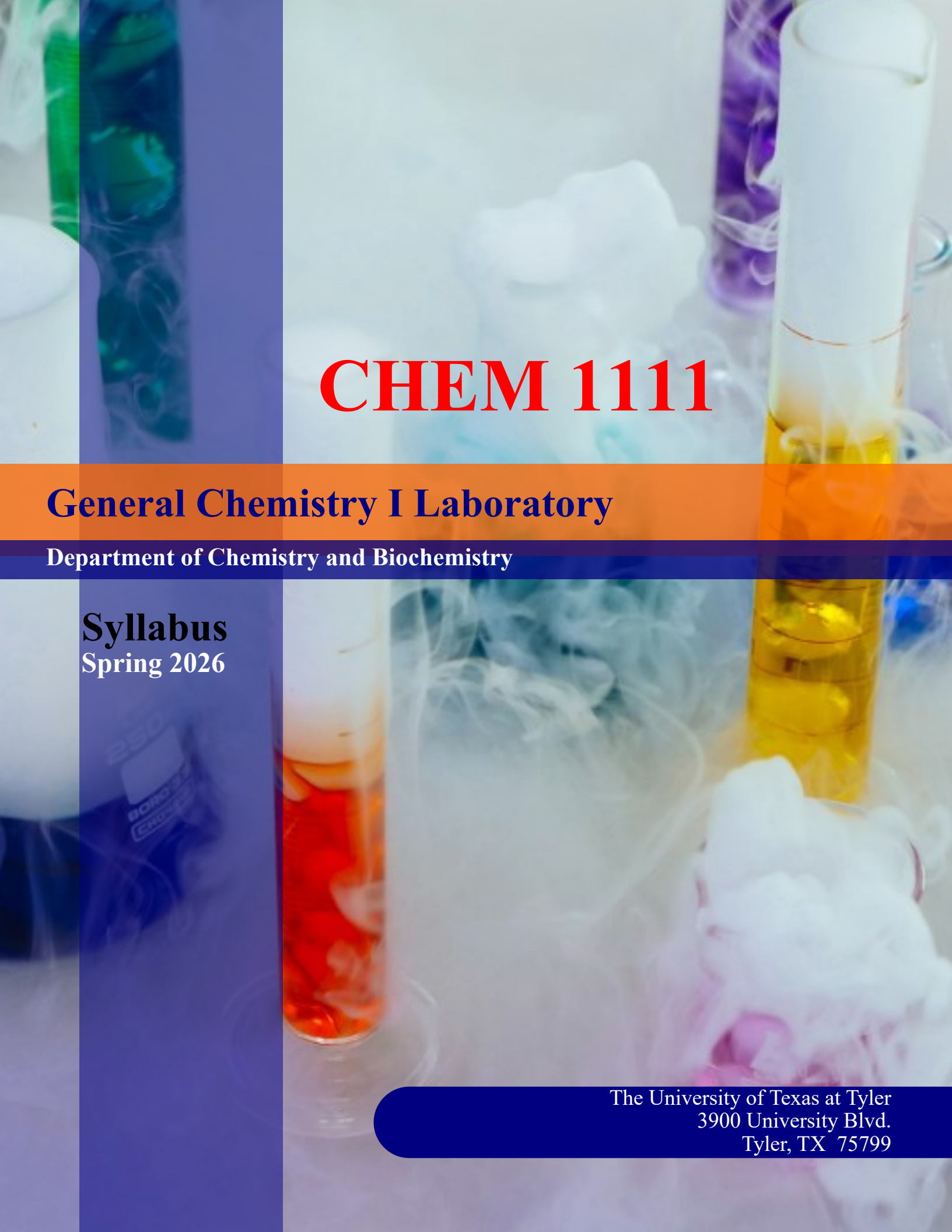

CHEM 1111

General Chemistry I Laboratory

Department of Chemistry and Biochemistry

Syllabus
Spring 2026

The University of Texas at Tyler
3900 University Blvd.
Tyler, TX 75799

Table of Contents

Meeting Times and Dates

Semester runs from Jan 12 to Apr 24

Section	Day & Time	Room	Instructor
001 & D001	Tues, 1:30 - 5:30 PM	RBS 3022	Nora McElroy
002	Wed, 1:00 - 5:00 PM	RBS 3022	Nora McElroy
003	Thurs, 1:30 - 5:30 PM	RBS 3022	Hope Miles
004	Fri, 1:00 - 5:00 PM	RBS 3022	Jerome Lewis
005	Fri, 1:00 - 5:00 PM	RBS 3018	Hope Miles
* Indicates Instructor of Record			

Instructor Contact Information

Instructor	Office	Office Hours	Email	Phone
Reed Norman	TBA		rnorman3@patriots.uttyler.edu	N/A
Nora McElroy	TBA	Mon, 12-1:30 PM Wed 2-3:30 PM	nmcelroy2@patriots.uttyler.edu	N/A
Hope Miles	TBA	Mon & Wed, 3-4:30 PM	hmiles2@patriots.uttyler.edu	N/A
Mr. Jerome Lewis	RBS 2013	Tu & Th, 3:30 pm - 5:30 pm Fri, 10:00 am - 11:00 am	jeromelewis@uttyler.edu	903.566.7206

Course Overview

Chemistry is an experimental science. Chemical knowledge has resulted from experimental observations and studies made by thousands of scientists over many centuries. In the chemistry laboratory, students will examine, test, and establish for themselves the chemical principles studied in class and from textbooks; will collect experimental data; and will use their reasoning to draw logical conclusions about the meaning of these date.

Prerequisite: *Credit for or concurrent enrollment in General Chemistry I (CHEM 1311).*

Student Learning Outcomes (Core Objective Assessed):

- Students will demonstrate the ability to make scientific predictions of natural phenomena using chemical concepts learned in the lab. (Critical Thinking Skills)
- Students will develop skills in collecting and managing data in order to express their results in a precise and reliable quantitative or qualitative form on lab reports. (Empirical and Quantitative Skills, Communication Skills)
- Students will apply chemical concepts to draw logical conclusions about the applicability of data to real-world problems. (Critical Thinking Skills)
- Students will use collected data to calculate physical or chemical quantities germane to the experiment being performed. (Empirical and Quantitative Skills)
- Students will develop teamwork skills that include not only the efficient acquisition of experimental data, but also the awareness of safety in the laboratory setting. (Teamwork)

In addition to the core objectives being assessed students will also be expected to:

- Use basic apparatus and apply experimental methodologies in the chemistry laboratory setting
- Demonstrate safe and proper handling of laboratory equipment and chemicals

Materials Required for Lab Work:

Laboratory Notebook: Each student must purchase and maintain a bound laboratory notebook in which to generate a *permanent* record of experimental observations, notes, calculations, etc. The lab record book you purchase must provide:

- a label for your name and contact information (phone, email, or other), course prefix (CHEM), course and section number (*e.g.* 1111.001), semester, and the instructor's name;
- a table of contents page
- pages consecutively *pre-numbered*;
- *preprinted* page headings for entering title, date, name, and *specific* lab section (e.g., CHEM 1111.001); and
- a *perforated*, carbonless duplicate for each page.

Lab Manual: CHEM 1112 General Chemistry I1 Laboratory Manual, Department of Chemistry, The University of Texas at Tyler, Tyler, Texas, 2014. **Provided online through Canvas.**

Scientific Calculator

Computer Access: with Microsoft Excel, PowerPoint, Word, Zoom, and LoggerPro (free for students through course).

Personal Protect Equipment (PPE):

1. **Splash-Proof Goggles** must be worn in the laboratory whenever you or your neighbors are performing experiments. (Time during your initial lab period will be allotted for purchasing goggles from your American Chemical Society Student Affiliates on campus to ensure that you will be prepared to comply with this requirement.) **Warning**: students will not be admitted into the lab without splash-proof goggles!
2. **Nitrile Gloves** must be worn in the laboratory whenever you are handling chemicals and performing experiments. Gloves will be provided.
3. **Appropriate clothing** suitable for laboratory work must be worn by students. **Warning**: students will not be allowed to work in the lab without an effective coverage from chest to toes! (**This means *no open-toed shoes* or extensive areas of exposed skin on your torso!**) If you do not meet these requirements, you cannot work in the lab until the requirements are met.

Laboratory Requirements:

A. Students who perform unauthorized experiments or who remove chemicals or equipment from the lab may be dropped from the course or have their grades lowered.

B. Arrive on time and be prepared for each laboratory session. The laboratory experiments are such that the average student can complete the work during the assigned time. This can be accomplished only if a reasonable amount of study and preparation has been done before coming to the laboratory. Plan what is to be done in each experiment before coming to the lab. It will save time and will aid in avoiding serious mistakes.

C. Students are responsible for laboratory equipment furnished by the Department of Chemistry and students may be required to purchase any missing or damaged equipment.

D. The grading of experiments will be based on the evaluations of each student's laboratory performance, experimental results, and the quality of their laboratory reports (*i.e.*, analyses and presentations of results.)

E. Students will be responsible for maintaining cleanliness in the desk areas. Students will be responsible to maintain a clean work area during each lab session Students will be required to clean/sanitize their area of responsibility which may include cleaning/sanitation of shelves, sinks, hoods, reagent tables, and glassware/equipment. Students who neglect their clean-up responsibilities will have their grades significantly lowered for that day's work. Therefore, it is important that students have their clean-up duties approved by the lab instructor before leaving lab.

F. Students are required to turn in a lab report for each experiment. Your instructor will explain what is expected in the lab reports.

G. Each instructor will provide an addendum to this syllabus listing specific requirements for that section.

Safety Policy

Read, comprehend, and follow the laboratory safety guidelines at all times. These rules include, but are not limited to:

Safety goggles must be worn in the laboratory at all times. Students who do not have safety goggles will not be admitted into the laboratory.

You will not be allowed in the lab with open-toed shoes or any clothing exposing extensive areas of your skin to the risks of burns or chemical splashes. Please come to class each day wearing long pants or skirt, an appropriate shirt and closed toe shoes. There is not sufficient time for you to return home to change clothes and we have NO opportunity to make-up missed labs.

Do not consume *anything* by mouth in the lab, including gum and smokeless tobacco! There is no eating in the lab space.

Do not perform unauthorized experiments or remove chemicals or equipment.

Note: we take safety infractions very seriously. Depending on the seriousness of such infractions, you may lose points on your lab work habits grade, be dismissed and receive a zero on any work missed, or even be dropped from the course.

Course Grading

The grading of the lab reports, quizzes, and exams are up to your instructor; however the weighting of these items will be uniform across all lab sections (see below). Your overall course grade will tentatively be based on the 90/80/70/60 percentage scale, but it may be adjusted based upon your instructor's judgment of the overall class performance.

The grades for this course will be weighted as follows:

10%	Pre-Lab Quizzes
10%	Lab Notebook Pages
45%	Laboratory Reports
20%	Lab Practical
15%	Teamwork Project
100%	Total

Pre-Lab Quizzes:

Pre-lab quizzes will be assigned on Canvas before each lab meeting to encourage you to be prepared for class. The quizzes will be based on the lab manual and lab videos from the tool kit. You will only get one (1) chance to take the quiz. You will have a week to take the quiz; therefore, you have enough time to complete them. The quizzes do not have a timer; however, will close on the due date (the beginning of your lab section). It is essential that all students come prepared to start working on their experiment as soon as class begins.

Laboratory Notebook:

Maintaining detailed records of your laboratory work is vital for producing quality scientific reports or publications. A scientific investigator cannot prove their work is valid without a properly maintained notebook.

Lab notebook page assignments will be worth thirty (40) points each. The lab notebook pages will consist:

- purpose (3 pts), safety (10 pts), procedure (5 pts), data (5 pts), calculations (7 pts), and conclusion.

Students will need to complete their Pre-Lab before they are able to conduct an experiment. The Pre-lab consists of a purpose (1 or 2 sentences), safety table (for the listed chemicals from the lab manual), and a procedure section. **The Pre-lab will be checked by your instructor or teaching assistant (undergraduate TA) before you can conduct the experiment.**

The data, results, and calculation section will be completed during the experiment, and your instructor will state what data and results you will need to have in your lab notebook pages. Once the experiment is complete, the students will turn in their lab notebook pages into their instructor. Lab notebook pages will also be used to track attendance; therefore, it is important to turn them in at the end of lab.

Teamwork Project:

While it is important to be able to communicate scientific information in writing, it is equally important to do the same orally. In a group, you and your teammates will be required to collaborate and develop a presentation about an assigned molecule. You will decide who you will work with, your team leader, submit a 2D structure of your molecule, and present information about your molecule. structure or 3D computer generated model of your molecule. Yes, you must present your presentation in-person. More specific details for the project will be given to you by your instructor.

Lab Reports:

Laboratory reports will be completed and submitted in-person at the end of each experiment. All reports will be written during class in the laboratory notebook. Copies of the notebook pages, completed Report sheets, and discussion questions for each report. It is important that you can properly write, format and communicate a scientific document effectively. The report sheets are where you will write the FINAL answer with appropriate units. Answers to discussion questions will need to be answered in well structured sentences that communicate you ideas/thoughts. To accomplish this, you may need to generate tables and graph to properly communicate the information. Some experiments may required the use of Microsoft Excel (or equivalent) and LoggerPro. Your instructor will provide you with details for each experiment.

- **Lab Reports consist of: report sheets, discussion questions, and lab notebook pages**

Dropping the Course:

The last day to withdraw from the course with an automatic grade of "W" is listed on the laboratory schedule. Before dropping the course, you should consult with your instructor to examine all of your options. Dropping this course does not obligate you to also drop the lecture course because they are two separate courses. However, dropping the lecture course may significantly hinder your progress in this course because you will be expected to learn the chemical theories and concepts on your own.

General Chemistry I Laboratory Schedule

Week Of:	Experiment Schedule
Jan 12-16	Introduction to course, syllabus, schedule, lab notebooks & reports, lab safety, and teamwork project
Jan 19-23	Exp 1: Measurements in Chemistry
Jan 26-30	Exp 2: Determining the Density of Solids and Liquids Census Date: Jan 26th
Feb 2-6	Exp 3: Separating the Components of a Mixture
Feb 9-13	Exp 4: Chromatography
Feb 16-20	Exp 5: Determining the Formula of a Hydrate Choose Teamwork Project Groups due
Feb 23-27	Exp 6: Reactions of Copper
Mar 2-6	Exp 7: Acid-Base Titration
Mar 9-13	SPRING BREAK! - Labs will not meet
Mar 16-20	Exp 8: Thermochemistry
Mar 23-27	Exp 9: Atomic Emission Spectra
Mar 30-Apr 3	Lab Practical Last day (Mar 30th) to drop or withdraw from a course with an grade of "W"
Apr 6-10	Exp 10: Molecular Geometry and Bonding Lewis Structure of Molecule due
Apr 13-17	Teamwork Projects
Apr 20-24	Make-up Lab
Apr 27-May 1	Finals Week— Labs will not meet this week

Note: the right to substitute or switch labs, as required by unforeseen circumstances, is reserved. All lab procedures are provided in your lab manual.

Late Work & Make Up Expectations

A makeup lab will not be given this semester. Therefore, attendance to lab is essential. ***An unexcused absence results in a grade of zero for any lab work or exam missed.***

Normally, an excused absence includes medical emergencies, a death in your family or required travel for a UT Tyler's event (*e.g.,* athletic team travel). All supporting documentation should be presented to the lab instructor. If this is the case, a paper lab will be provided to make up missed lab. Students who anticipate being absent from class due to a religious observance are *required* to inform their instructors of such absences as soon as possible (at least one week before the religious holiday).

Students who anticipate being absent from class due to a required travel for a UT Tyler's event (e.g., athletic team travel) are *required* to inform their instructor(s) of such absences at least one week before the absence.

Artificial Intelligence Statement

UT Tyler is committed to exploring and using artificial intelligence (AI) tools as appropriate for the discipline and task undertaken. We encourage discussing AI tools' ethical, societal, philosophical, and disciplinary implications. All uses of AI should be acknowledged as this aligns with our commitment to honor and integrity, as noted in UT Tyler's Honor Code. Faculty and students must not use protected information, data, or copyrighted materials when using any AI tool. Additionally, users should be aware that AI tools rely on predictive models to generate content that may appear correct but is sometimes shown to be incomplete, inaccurate, taken without attribution from other sources, and/or biased. Consequently, an AI tool should not be considered a substitute for traditional approaches to research. You are ultimately responsible for the quality and content of the information you submit. Misusing AI tools that violate the guidelines specified for this course is considered a breach of academic integrity. The student will be subject to disciplinary actions as outlined in UT Tyler's Academic Integrity Policy. Refer to the About This Course section of the UT Tyler Syllabus Module for specific information on appropriate use of AI in your course(s).

For this course, AI is not permitted in this course at all. In this course, all work submitted by students must be their own ideas and thoughts. All assignments and course experiments have been designed to support learning. Doing work without human or artificial intelligence will provide and support you in your efforts of mastering the course material. In this course, any AI tools, for example ChatGPT, is prohibited throughout the semester. Deviations from these guidelines will be considered a violation of UT Tyler's Honor Code and academic honesty values.