

CHM 2045L: CHEMISTRY I LAB

Clearwater Campus – Spring Term 2023 - Class 333 (615) - Monday, 2:00 pm-4:40 pm – NM252

Instructor: Giuseppe Spadola M.S.

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Text: Custom CHM 2045L Lab Manual (ISBN: **9781711447988**)

Course Info: This chemistry lab course includes experiments involving density, separation of mixtures, stoichiometry, titration, precipitation, calorimetry, atomic and molecular structure and gas laws. (co-requisite, CHM 2045)

Required: A scientific calculator (TI-30, or similar) (BRING WITH YOU EACH WEEK!)
Lab Coat AND Approved Safety Goggles (not glasses)

Department: Natural Science Department Contacts:

Academic Chair: Mr. Tyrone Clinton

Office Location: NM 212 (Clearwater Campus) - Office Number: 727-791-2503

Dean: Dr. Natavia Middleton

Office Location: LI 280 (Seminole Campus) - Office Number: 727-398-8288

FREE SCIENCE TUTORS <https://mycoursesupport.spcollege.edu/learning-centers>

MyCourses Support <https://mycoursesupport.spcollege.edu>

For IT Help Call 341-HELP

For non-academic resources, please see: <http://go.spcollege.edu/referrals>

ATTENDANCE POLICY: Attendance will be taken at every lab meeting. Tardiness is not acceptable. If you miss my discussion at the beginning of lab, you will miss important explanations, and therefore would be unsafe in the lab. Under no circumstances will you be admitted to lab if you are more than 10 minutes late, and you will be considered absent for that lab meeting.

Attendance must be reported for the first two weeks of the semester. If you are not attending this class during this time, you will be automatically dropped from the course. The college-wide attendance policy is included in the “Addendum to the Syllabus”, which is posted in MyCourses. At the 60% mark in the semester, students will be evaluated for active participation in the course. **If you have missed three or more lab meetings, you will fail to meet my criteria for active participation and will be withdrawn and given a “WF” for the course.**

PLEASE NOTE: The lecture and the lab are co-requisites. If you withdraw from lecture, you must also withdraw from the lab. If you withdraw from the lab, you must also withdraw from the lecture. The last day to withdraw with a "W" is **March 29, 2023**. Failure to drop before the drop date will result in you receiving a final grade of "F." NOTE: instructors are NOT able to withdraw students.

REQUIRED SUPPLIES: These items must be brought with you to the lab, no later than the second meeting. You will not be allowed to continue in the lab without them. The listed items are needed for each lab, beginning with the first week.

1. LAB MANUAL (listed above)
2. A **bound** composition-style notebook. (This will be your lab **notebook**).
3. Safety goggles (NOT glasses), approved for use in chemical laboratories. (American National Standards Institute (ANSI) Z-87.1-1989).



4. A laboratory coat and rubber gloves are required. Do NOT wear your best clothes to chemistry lab!
5. **Shoes that cover the ENTIRE foot are required.** Any student not wearing appropriate shoes will not be admitted to the lab. It is suggested that you keep an appropriate pair of shoes in your car.

NOTE: Safety and Conduct is the number one priority in this lab. It is YOUR responsibility to know and follow the rules and procedures at all times. Prior to signing the Safety Rules Form, be sure that you have read the document thoroughly. Appropriate dress must be worn to lab or you will not be allowed to stay for the lab work and you will receive an unexcused absence and a grade of zero for that day.

Clothing must completely cover you from neck to knees + sleeves, minimum (no bare midriffs!) Shoulders must be covered; you must have short or long sleeves; no loose sleeves.

TESTING / GRADING POLICY: The following weights will be given to assignments:

1. The quality of **your lab notebook will be graded for a max of 20 pts.**
2. This will count as your weekly lab report. Again, if you miss a lab, you will receive a zero for that lab report grade. Lab reports cannot be made up. Each lab report will be worth ten points and your one lowest lab report grade will be dropped. **Lab reports will count for 50% of your overall lab grade (110 pts)**
3. The **lab midterm and final will each count for 45 pts** of your overall grade. Your lab notebook cannot be referenced for the midterm or final. Students may not share calculators on quizzes or exams.
4. **10% may be deducted** from each lab report score for failure to follow experimental procedures and safety rules. Always wear your goggles and clean up your glassware and station when you have finished with your experiment.

You can calculate your grade as follows:

	Total Points Possible
Notebook quality	20
Reports	110
Final	45
Midterm	45

Your letter grade will be based on the following total points:

A 198 - 220 **B** 176 - 197 **C** 154 - 175 **D** 132 - 153 **F** < 131

One Late Paper Policy: Each student is allowed ONE late lab report up to one week late without penalty. Any lab report not turned in by the start of the lab period the following week will be considered late. Each student is only allowed one late lab report per semester. The second, or third, (etc) late lab report will not be accepted for credit.

REQUIRED ASSIGNMENTS EACH WEEK:

- 1- Read the introductory material pertaining to each experiment BEFORE the scheduled lab.
- 2- In your own words, **write a detailed procedure for the lab in your lab notebook** (BEFORE coming to lab). You will need to follow the procedure in your lab notebook (not in your lab manual) each day in lab, so write your procedure carefully! Leave room to record data, perform calculations, etc. **This work must be in pen. Remember: the quality of your notebook is graded as well.**
- 3- As you go through the procedure in lab, take DETAILED notes in your notebook. Record masses and volumes used, colors and odors detected, reactions performed, etc. **Your notebook is your only source for completing the lab successfully and can also be used during any quiz as a resource.**

- 4- While in lab, **data and calculations important to the procedure should be recorded in your lab notebook in pen.** You will then need to *neatly* complete your data and calculations in your lab manual, and you must have me sign your data page before you leave.
- 5- If at ANY time in the lab I see you referencing the procedure in your lab manual (rather than your notebook), I reserve the right to confiscate it for the remainder of the lab period. If at ANY time I find that you have not come to lab prepared with your procedure clearly written in your lab notebook, you will be excused from lab and given a grade of zero for that report grade.

GENERAL INSTRUCTIONS FOR LABORATORY COURSE 2045L:

1. Bring with you a copy of the Lab Report that you find into myCourses and complete it before leaving the lab. **Since most experiments will be worked with a partner the lab report may be signed by both.** In this case, they are responsible together: so discuss with your partner about all calculations, conclusions and other report answers.
2. Please work with the person sitting NEXT to you. No more than two people are to work together at one time unless I approve it.
3. You may leave the lab when you have finished with the experiment, cleaned all used glassware and your area and when you have completed any calculations that I require. Remember, I need to sign your completed data page(s) before you leave lab. Most reagents will need to be disposed of in specially marked containers located in the fume hood. Please ask if you are not sure. DO NOT put any solid materials in the sinks. Do not dispose of any solutions or liquids into the sink unless the instructor approves. Please inform me of all spills immediately.
- 4 **Replace caps / lids on all containers immediately after dispensing. Do not mix spatulas, droppers or any other dispensing items. When using dropper bottles, use proper technique for dispensing the solution into your test tube. Do not allow the dropper to touch your test tube! Doing so will contaminate the solutions.**

Special Accommodations

If you wish to receive special accommodations as a student with a documented disability, please make an appointment with the Learning Specialist on this campus (712-5789). If you have a documented hearing loss, please contact the Program for the Deaf at 791-2628 (V/TDD). If you will need assistance during an emergency classroom evacuation, it is imperative that you speak with you campus Learning Specialist immediately about arrangements for your safety.

CAMPUS SAFETY AND SECURITY: For information on campus safety and security policies please contact 727-791-2560. For information on sexual offenders on your campus please contact campus security or the associate provost office or for general information go to the State of Florida website at <http://www3.fdle.state.fl.us/sopu/index.asp>.

CLASSROOM BEHAVIOR: The following behavior may warrant dismissal from:

Regular use of profanity in lab, talking or texting on your cell phone during lab, leaving lab repeatedly to talk or text on your cell phone, arriving to lab more than 10 minutes late, drinking or eating in lab, wearing shoes that do not cover your entire foot (including your heels), and/or not following safety rules (such as wearing your goggles). Please be safe and respectful at all times while in the lab room.

CHM 2045L Schedule of Experiments – Spring 2023

Date:	Experiment:
1/23	Check-in and safety rules (Lab. 1)
1/30	Physical and Chemical Changes and Properties (Lab. 2)
2/6	Density of Solids and Liquids (Lab. 3)
2/13	Percent Composition of a Hydrated Salt (Lab. 4)
2/20	Determination of an Empirical Formula (Lab. 5)
2/27	Titration I: Standardization of NaOH (Lab. 6)
3/6	Titration II: Titration of an Antacid (Lab. 7)
3/13	SPRING BREAK
3/20	Lab Midterm (Lab. 8)
3/27	Unknown Ionic Compounds (Lab. 9)
3/29	Last Day to Drop with a “W”
4/3	Gas Law Constant (Lab. 10)
4/10	Calorimetry (Lab. 11)
4/17	Chromatography (Lab. 12)
4/24	VSEPR (Lab. 13)
5/1	Heat of Vaporization (Lab. 14)
5/8	Final Exam (Lab. 15)

NOTE Use of goggles and appropriate dress (closed toe shoes, hair tied back, etc.) during the lab exercises is required. Students who do not wear safety goggles and/or dress appropriately will be asked to leave the lab. You will need to bring safety goggles and appropriate dress each day to lab.

No exceptions!!