

CHEM 124L: General Chemistry II Laboratory

Fall 2018 – Section 501 – CRN 34796

Instructor: Dr. Jerry Godbout

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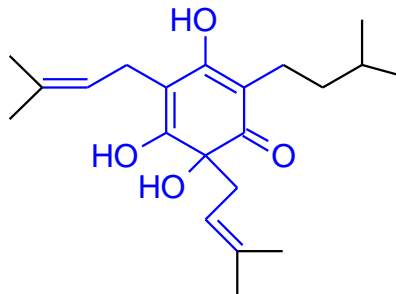
Office Hours: Monday 1:00 pm – 3:00 pm,
Wednesday 2:00 pm – 4:00 pm
Thursday 9:00 am – 10:00 am, and anytime by appointment

Meeting Times: Wednesday 10:30 am – 1:15 pm, VAAS 128

Course Description: (1) Experiments illustrating the fundamental principles and techniques of chemistry. Lab: 3 hours. Prerequisite: ACT Math =>25 or SAT Math =>570 or MATH 121 or MATH 123 or MATH 150 or MATH 162 or MATH 163 or MATH 180 or MATH 181 or MATH 264 or CHEM 121 and CHEM 123L. Co-requisite: CHEM 122. Meets UNMCC – Area 3: Physical and Natural Sciences; meets NMCC– Area III: Laboratory Science.

Periodic Table of the Elements

1																	18																											
1	H																	2	He																									
3	Li	4	Be											5	B	6	C	7	N	8	O	9	F	10	Ne																			
11	Na	12	Mg											13	Al	14	Si	15	P	16	S	17	Cl	18	Ar																			
19	K	20	Ca	21	Sc	22	Ti	23	V	24	Cr	25	Mn	26	Fe	27	Co	28	Ni	29	Cu	30	Zn	31	Ga	32	Ge	33	As	34	Se	35	Br	36	Kr									
37	Rb	38	Sr	39	Y	40	Zr	41	Nb	42	Mo	43	Tc	44	Ru	45	Rh	46	Pd	47	Ag	48	Cd	49	In	50	Sn	51	Sb	52	Te	53	I	54	Xe									
55	Cs	56	Ba	57-71											72	Hf	73	Ta	74	W	75	Re	76	Os	77	Ir	78	Pt	79	Au	80	Hg	81	Tl	82	Pb	83	Bi	84	Po	85	At	86	Rn
87	Fr	88	Ra	89-103											104	Rf	105	Db	106	Sg	107	Bh	108	Hs	109	Mt	110	Ds	111	Rg	112	Cn	113	Uut	114	Fl	115	Uup	116	Lv	117	Uus	118	Uuo
89	La	90	Ce	91	Pr	92	Nd	93	Pm	94	Sm	95	Eu	96	Gd	97	Tb	98	Dy	99	Ho	100	Er	101	Tm	102	Yb	103	Lu															
89	Ac	90	Th	91	Pa	92	U	93	Np	94	Pu	95	Am	96	Cm	97	Bk	98	Cf	99	Es	100	Fm	101	Md	102	No	103	Lr															



COURSE/INSTRUCTOR COMMUNICATIONS

- Email is the most effective. Electronic communication for this course **MUST** be through your UNM email.
- When requesting an appointment (which I am always happy to schedule), please propose three (3) times that work for you in your initial request. This will simplify and quicken the process
- It is the responsibility of the student to keep up with course announcements. **Check your UNM email and Blackboard Learn daily!**

WHAT YOU'LL NEED (Required Resources)

- Chemistry: A Molecular Approach (3rd or 4th ed)
- Safety goggles, Lab Coat, Lab Notebook (CHEM 123L notebook may be used)
- Calculator (non-graphing) with log/antilog and exponential functions
- Internet Access: *Blackboard Learn* and *UNM email address must be checked daily!*

WHAT IF YOU NEED HELP? (UNM-Valencia Resources)

- **Instructor:** Office hours, STEM Center Hours, email
- **STEM Center:** Tutors*, molecular modelling kits, Laptops, textbooks

*When using tutors, it is the **students'** responsibility to make sure they understand well enough to complete the problems on **their own**.

HOW IS YOUR GRADE DETERMINED?

(Exams, Quizzes, Homework, and the Like)

	How Many	Points
Experiments & Activities	8	240
Project Proposal	1	40
Project Poster	1	80
Project Presentations	1	80
Final Exam	1	15 %
Total		100 %

* Approximate values

WHAT DO I NEED FOR AN A?

(What's the grading scale?)

Earn This %	Get This Grade
98	A+
92	A
90	A-
88	B+
83	B
80	B-
78	C+
73	C
69	C-
67	D+
62	D
60	D-
55	F+
0	F

Important Dates & Holidays	
Fri 31 Aug 2018	Last day to register, ADD sections, and change credit hours Enrollment cancellation for non-payment
Mon 03 Sep 2018	University Holiday – Labor Day
Fri 07 Sep 2018	Last Day to DROP without “W” grade and 100% tuition refund on LoboWEB, Last Day to CHANGE grade option
Thu 11 Oct 2018	University Holiday – Fall Break
Fri 09 Nov 2018	Last Day to withdraw WITHOUT Dean’s Permission
Thu 22 Nov 2018	University Holiday – Thanksgiving
Fri 07 Dec 2018	Last day to change grading options Last Day to withdraw WITH Dean’s Permission
Wed 12 Dec 2018	Final Exam (for this section)

WHEN WE LEARN THIS STUFF?

(Schedule is approximate and subject to change by the instructor)

Week	Activity
1 22 Aug	<ul style="list-style-type: none"> • Safety, Lab Notebook, Measurements • 121 Review Games
2 29 Aug	Activity TBA
3 05 Sep	Colligative Properties of Candles
4 12 Sep	Solution Spectroscopy
5 19 Sep	Kinetics of Food Coloring Bleaching
6 26 Sep	Hard Water Titration
7 03 Oct	Le Châtelier’s Principle
8 10 Oct	Independent Project Part I
9 17 Oct	K_a Determination for a Weak Acid
10 24 Oct	Independent Project Part II – Experimentation
11 31 Oct	Independent Project Part II – Experimentation
12 7 Nov	Independent Project Part II – Experimentation
13 14 Nov	Independent Project Part II – Analysis
14 21 Nov	TBA
15 28 Nov	Final Project PowerPoint Presentation
16 05 Nov	Project Poster Session
Final Exam Week - no assignments, no lab	

Course-Level Student Learning Outcomes

By the end of the course, students will be able to...

1. Conduct laboratory experiments safely by wearing appropriate protection, by handling and disposing of chemicals correctly, and by putting away all laboratory equipment and cleaning your lab bench after use.
2. Prepare scientific graphs to demonstrate quantitative relationships between variables.
3. Demonstrate mastery in making chemical measurements.
4. Demonstrate mastery in experimental techniques including: the preparation of solutions using volumetric glassware, conducting isolation methods such as filtration, conducting calorimetric measurements, and conducting spectrophotometric measurements.
5. Write simple hypotheses based on selected chemical principles and/or observations.
6. Design experimental procedures for simple lab questions.
7. Properly use a lab notebook to record experimental data and observations with correct significant figures and units.
8. Make meaningful analyses of experimental data and summarize results in a proper format.
9. Communicate scientific arguments effectively and logically in written and oral forms.

Independent Research Project

- The independent research project for CHEM 124L has three components: the research proposal, the lab poster, and the research presentation (powerpoint).
- Each lab group will develop their independent research proposal. It must involve non-alcoholic liquids (ie. cola, milk, tea, coffee, fruit juice, well water, etc.). The proposal must be approved by Dr. Godbout. No two groups will test the same hypothesis or do the same experiments.
- The research proposal is due week 8. Turn in 1 per lab group. Include the hypothesis, a COMPLETE list of materials required, a proposed method (refer to a published laboratory procedure), and references. You will be graded on originality, organization, completion, sound scientific ideology and proper grammar.
- After approval of your research proposal, you will conduct the experiments during week 10 through week 12. No unauthorized experiments should be conducted at this time. If an unauthorized experiment is conducted, you will receive a zero on all components of the independent research proposal.
- If experimentation is completed during weeks 10-12, lab time on week 13 should be used to begin to compile data, discuss interpretation with Dr. Terry, and create the lab poster and presentation.
- The research presentation will occur in class during week 15, the poster is also due at this time.
- The poster session will occur in the hallway outside of lab during week 16.

Other Things That Aren't Chemistry, But Are Still Important (University Policies)

Equal Access Services

If you have a documented disability or psychological/medical condition that may affect your performance in this class, please register with Equal Access Services as soon as possible so I can provide your accommodations in a timely manner. EAS can provide a quiet place to take exams, additional time, and additional services if there is a documented need. For more information, please see their website at <https://valencia.unm.edu/students/advisement-and-counseling/equal-access-services.html>, or scan the QR code at right:



Equal Access Services

Academic Integrity

Having academic integrity is paramount to your success in any class. Plagiarism or cheating is not tolerated. Any instance of this will result in a grade of zero for that assignment. Here is the link to the UNM Academic Dishonesty Policy:

<https://policy.unm.edu/regents-policies/section-4/4-8.html>. or scan the QR code at right:



Academic Integrity Policy

The policy states:

Each student is expected "to maintain the highest standards of honesty and integrity in academic and professional matters. The University reserves the right to take disciplinary action, up to and including dismissal, against any student who is found guilty of academic dishonesty or who otherwise fails to meet the expected

standards. Any student judged to have engaged in academic dishonesty in course work may receive a reduced or failing grade for the work in question and/or for the course.

Academic Dishonesty is defined as:

"Academic dishonesty" includes, but is not limited to, dishonesty in quizzes, tests, or assignments; claiming credit for work not done or done by others; hindering the academic work of other students; misrepresenting academic or professional qualifications within or without the University; and nondisclosure or misrepresentation in filling out applications or other University records.

Sexual Misconduct and Gender Discrimination

In an effort to meet obligations under Title IX, UNM faculty, teaching assistants, and graduate assistants are considered "responsible employees." by the Department of Education (see page 15 - <http://www2.ed.gov/about/offices/list/ocr/docs/qa-201404-title-ix.pdf>).

This designation requires that any report made to a faculty member, TA, or GA regarding sexual misconduct or gender discrimination must be reported to the Office of Equal Opportunity and the Title IX Coordinator. For more information on this policy, <https://policy.unm.edu/university-policies/2000/2740.html> or scan the QR Code at right:



Title IX Policy