

Chem 9: General Chemistry I Laboratory**Fall 2011**

Instructors:	Dr. Patricia Jackson	BROH 332	631-4425	pjackson@stmarys-ca.edu
	Dr. Steven Bachofer	BROH 304	631 4694	bachofer@stmarys-ca.edu
	Dr. Jeffrey Sigman	BROH 312	631-8222	jsigman@stmarys-ca.edu
	Dr. Michelle Shulman	BROH 308	631-8220	mshulman@stmarys-ca.edu
	Dr. Debjani Bhaduri	BROH 332	631-4425	db9@stmarys-ca.edu
	Dr. Alexander Pandell	BROH 328	631-8221	apandell@stmarys-ca.edu
	Dr. Mircea Gheorghiu	BROH 300	TBA	
	Dr. Martin Murphy	BROH 300	TBA	

Lab Experiments: The procedures for all experiments will be provided as a lab manual, distributed during the first lab session or in lecture. Students are expected to carefully study the procedure for each experiment prior to the start of lab. Frequent lab quizzes will be administered to emphasize the importance of careful pre-lab preparation.

Computers: Personal computers will be used to collect and/or analyze data in some experiments. Laptop computers will be provided for use in the lab.

Learning Goals

1. Reinforce fundamental chemical concepts through laboratory experiments
2. Emphasize the use of safe and effective laboratory techniques
3. Develop an understanding of statistical analysis – appreciation for precision and accuracy in reporting of experimental data
4. To learn scientific inquiry through hypothesis driven experimentation (Bay Area Water Analysis Lab), data collection, analysis, and interpretation of data
5. Develop qualitative and quantitative laboratory skills which may include graphical analysis
6. Stress thorough and organized documentation in lab report or notebooks

Accommodations for Students with Disabilities	Student Disability Services: Student Disability Services extends reasonable and appropriate accommodations that take into account the context of the course and its essential elements for individuals with qualifying disabilities. Students with disabilities are encouraged to contact the Student Disability Services Office at (925) 631-4358 to set up a confidential appointment to discuss accommodation, policies, guidelines and available services. Additional information regarding the services available may be found at the following address on the Saint Mary's website: http://www.stmarys-ca.edu/academics/academic-advising-and-achievement/student-disability-services.html
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Schedule:

Week of	Expt. #	Experiment	Assignment (point value)
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8/29		Check-in and Lab Orientation (Monday lab will do experiment 1)	
9/5	1	Scientific Method and Measurement (No Lab on 9/5, Labor Day)	Pre (10) + NB (30)
9/12	2	Synthesis of a Chemical Compound: Making Alum from Aluminum	Pre (10) + NB (30)
9/19	3	Identification of a Reaction Product Week 1: Prepare compound	Pre (10) + NB (30)
9/26		Week 2: Weigh product, Finish calculations	
9/26	4	Water Analysis Week 1: Part A-B	Pre (10) + Post (50) Postlab Quiz given week of 10/17
10/3		Week 2: Parts C-D	
10/10		No Labs this week, Midterm Holiday Thursday and Friday	
10/17	5	Heat Transfer	NB (30)
10/24	6	Introduction to Spectroscopy: Exploring Light and Color	WS (40)
10/31	7	Spectroscopic Analysis: Using Light and Color to Investigate Kool-Aid Week 1: Part 1	Pre (10) + Post (50) + SS/GR (10) Postlab quiz given week of 11/14
11/7		Week 2: Part 2	
11/14	8	Lewis Structures and VSEPR Theory	WS (40)
11/28	9	Global Heat Retention and Global Warming	Pre (10) + NB (30)
12/5		Final Lab Notebook Exam, check-out, and clean-up	Exam (100)

Grading: scale:	Pre-lab assignments (Pre)	60 pts	Approximate grading	
	Notebook pages (NB)	150 pts	<i>(based on a 500 point total)</i>	
	Worksheets (WS)	80 pts	100 - 80%	A
	Post-lab quizzes (Post)	100 pts	80 - 65%	B
	Spreadsheet/graph (SS/GR)	10 pts	65 - 50%	C
	Final lab notebook exam (Exam)	100 pts	50 - 35%	D
			Below 35%	F
	Total	500 pts		