

Chemistry 125/126
General Chemistry - Inorganic Laboratory
Spring 2008

COURSE INFORMATION (See additional information, pp.214-228 in course lab manual)

Course information is available on the world wide web: <http://www.umich.edu/~chem125>

Course Coordinator and Lecturer Nancy Konigsberg Kerner	Office 3541	Office Hours M and W 11am -noon <i>Phone :763-5372</i> <i>e-mail: nkerner@umich.edu</i>
---	-----------------------	--

Chemistry 125 and 126 are 1-credit co-requisites that comprise the same coursework formerly associated with the 2-credit Chem. 125 course. For grading purposes, these courses are dependent co-requisites. Students will only earn credit in Chem. 126 by completing Chem. 125, and vice versa. The grade earned in one of these courses will be earned in the other.

GSI's (TBA)

Lang Ming	minglang@umich.edu	section 112/113
Jenna Welby	jwelby@umich.edu	section 110/111
Noah Gardner	npgardner@umich.edu	section 114/115

Overrides and wait lists:

Report to the chemistry department's administrative office (1500 chem)

Lectures

Lectures occur prior to the start of a new topic and experiment. Refer to the course schedule (below) for specific dates and topics.

Discussions

Refer to the discussion information provided in the lab manual, p.226 for information regarding discussion issues such as absence, late arrival and grading. Discussions occur after the completion of an experiment and before the start of a new topic and experiment. Refer to the course schedule (below) for specific discussion dates and times.

Exams

There will be one term exam on Monday, June 16, noon – 2 pm.
Sample exams are provided on the course web site: <http://www.umich.edu/~chem125/>

Required Course Materials

Lab Manual: Konigsberg Kerner, N., and Penner-Hahn, J., Collaborative Investigations in Chemistry, Hayden McNeil Publishing, Inc., Winter 2008

Supplies: Marking pen for labeling tape on glassware

Safety and Special Needs.

Special safety problems? Contact Richard Giszczak (1608 chem; richg@umich.edu).
Special needs (e.g. large print exams or ?) Contact Nancy Kerner (3541 chem.; nkerner@umich.edu).

COURSE METHODS

Chemistry is an experimentally based science. We know what we know because scientists have made experimental observations that have led to fundamental understandings and principles regarding the properties and reactivity of matter. The experiments in this manual will involve you in the process of looking for property or reactivity data patterns to solve problems.

You will conduct "inquiry" experiments where you are *not* expected to know the outcome in advance. Inquiry consists of 3 phases – exploration, organization, and application. During exploration you will gather data in order to solve a problem. During the organization phase you will manipulate the data to look for patterns. During the application phase you will apply the results to the problem under investigation and make predictions about untested samples or real life situations.

During this laboratory-centered course you will use qualitative reasoning skills that scientists use when solving problems such as formulating hypothesis, organizing data, making inferences from data, and designing experiments. You will do most of your experiments in a group where you will combine and compare data, instead of competing with classmates for the "right" answer.

You don't need lab experience to do well in Chemistry 125/126. You *do* have to: prepare in advance for the labs; attend your laboratory section and work conscientiously and safely during the period; think about the experiments that you have done; and prepare in advance for the discussion. If you do these things, you should be able to get at least a B grade for the course.

Report Information and Turn in directions (Spring 2008).

You will be required to turn in an individual pre-lab report at the start of each new experiment and a team report at the conclusion of each experiment. The team report form provided in the manual is merely a fill-in the blank outline and does not state all the questions you need to answer. For maximum points on the team report, you need to respond to all directives and questions within the experiment itself and include specific examples from the data to support your conclusions.

	When?	Team vs. Individually	Where?	Comments
Pre lab report	Due at start of new experiment	Individually	Hand to GSI entering lab	
Team lab report	Due upon completion of experiment or as announced	Team – One copy per team	In lab or in GSI mailbox in basement under the stairs in the atrium	- Don't forget to print the class data before leaving lab - ALWAYS use SPECIFIC examples from the data to support answers!
Discussion (Presentation+Abstracts)	Abstract due upon completion of experiment .		In discussion or lab room after the lab is done	Share abstract for question with GSI and team in lab or via email

ABSENCE AND MAKE-UPS

Since the course is cumulative it is important that you not miss a lab. Occasionally, circumstances will arise that force you to miss a lab. During spring term there are few scheduled labs and it may therefore not be possible to schedule a make-up outside the normally scheduled lab hours. If you miss the last scheduled lab prior to check out, it will only be possible to schedule a make-up during Fall term 2008.

TEAM ASSIGNMENTS SPRING 2008

Team Discussion Question Assignments Spring 2008

Team	Experiment 1	Experiment 2	Experiment 3	Experiment 4	Experiment 5	Experiment 6
1	1	3	5	2	4	TBA
2	2	1	4	3	5	TBA
3	3	4	1	5	2	TBA
4	4	5	2	1	3	TBA
5	5	2	3	4	1	TBA
6						

Team Assignments Experiments 1 – 3 Spring 2008

Team	E 1 Part I Solution #	E 1 Part 4	E 2 Part 2	E 2 Part 3	E 2 Part 4	E 3 Part IB
1	1, 5, 15, 19	5	Group 1	Rxn 1 or 2	omit	Group 1
2	2, 6, 16, 7	6	Group 1	Rxn 3 or 4	omit	Group 2
3	3, 8, 9, 20	8	Group 1	Rxn 5 or 6	omit	Group 3
4	4, 8, 10, 21	8	Group 2	omit	Rxn 1 or 2	Group 4
5	14, 17, 18, 24	17	Group 2	omit	Rxn 3 or 4	Group 2
6						

Team Assignments Experiments 4 - 6 Spring 2008

Team	E 4 Parts 1 and 2	E 4 Part 3 Bromophenol Blue and	E5 Parts 1, 2B, and 3	E6
1	Group 1	Phenolphthalein	Group 1	Rxns
2	Group 2	Phenolphthalein	Group 2	will
3	Group 3	Phenolphthalein	Group 3	be
4	Group 1	Bromothymol blue	Group 4	lab
5	Group 2	Bromothymol blue	Group 1	assigned
6				