

Chemistry 103: Basic General Chemistry (4.0 Credits)
Fall Semester 2008

Instructor: Dr. Kriya L. Dunlap
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Lecture: TR 9:45-11:15, REIC 201
Lab: MTW, REIC 242
Office Hours: 11:15-12:15 TR, REIC 191 or by appointment

Prerequisites: Placement or concurrent enrollment in DEVM F105 or higher

Required Course Material: **Text book**, "Introduction to General, Organic, and Biochemistry" 8th edition (authors Bettelheim, Brown, March). A recommended student solutions manual accompanies the text book. A hand-held, radio frequency **clicker** is also required for this course. Students may purchase the clicker with the textbook or separately from the bookstore. An **Owl pin number** is also required for this course. The **lab manual** will be distributed at the first laboratory session. A **calculator** capable of scientific notation is also required for this course and should be brought to both class and lab.

Course Overview: Chemistry 103 (4.0 credit course) is the first semester of a two semester series in general chemistry. This course will include the fundamentals of chemistry as well as basic mathematical concepts. We will cover chapters 1-2, 4-9 of the text, which will provide an understanding of matter, atoms, chemical bonds and interactions, and chemical reactions.

Chem 103 Homepage (Blackboard): <https://classes.uaf.edu> then select Basic General Chemistry (F103X STACKED) and go to course documents. The contents include the syllabus, lecture presentations and grades.

Instructor's expectations: It is strongly recommended that each student read the portion of the textbook that corresponds to the lecture, before the class begins.

Exams: There will be two one hour exams given, accounting for 100 points each. Make-up exams will be allowed for good reasons only. Exams can not be made up unless you arrange a time before the exam and you have a valid excuse. In the event of an unforeseen emergency, contact me as soon as possible. You may be asked to document your excuse.

Final Exam: The final exam will be held during finals week on Tuesday December, 16th 8:00-10:00 am. It will be worth 200 points. The final exam will be cumulative.

OWL Homework: Homework problems will be done using the OWL (On-line Web-based Learning) system, developed at the University of Massachusetts Amherst. Access to OWL can be accomplished by going to <http://owl.cengage.com/>. Instructions for using the OWL system will be given at the end of the first day of lecture. Your login name is your last name. Your password is your student ID number. On your first visit, you should change your password to something more private. Do this by clicking on the Contact Info button on the left menu bar. Students will be given five chances to solve each OWL homework problem. Because of the large size of some of the files, the best place to work with OWL is at a terminal with high-speed Internet access, such as any of the public terminals on campus (go to www.uaf.edu/DCC/labs/ for information). Working through a modem requires patience. Some of the materials are in “.pdf” format and require the Adobe Acrobat reader, a free plug-in. **If you send an email to the OWL system and if you desire a return email from me, include your name and email address in the body of the message. The OWL administrators may have this information, but I do not.**

Laboratory: The purpose of the lab is to do hands-on investigation and to gain skills in scientific reasoning, experimental design, and use of chemicals and laboratory equipment. The labs are conducted by a graduate teaching assistant who will have specific office hours. Lab reports will be handed in each week, to be graded and returned by the teaching assistant. Eleven experiments are scheduled for the semester. The laboratory portion of your grade (100 points) will be based upon the average of your best ten lab grades. There is no make-up labs scheduled and students must attend at least 8 labs in order to pass the course. The first scheduled lab includes a safety review. **STUDENTS MUST ATTEND THE SAFETY REVIEW IN ORDER TO STAY IN THE COURSE.**

Help: There are a large number of sources of help for students that may be having difficulty the course or a particular topic. Students may make an appointment to see me for help. Additionally, chemistry department offers free tutoring services. The student may also see any lab TA for help during the TA’s office hours.

Ethical Consideration: The Chemistry “Department Policy on Cheating” is this: *Any student caught cheating will be assigned a course grade of F. The student’s academic advisor will be notified of this failing grade and the student will not be allowed to drop the course.* This includes the use of another student’s clicker.

Disabilities: Students with a physical or learning disability are required to identify themselves to Mary Matthews (x 7043) in the Disability Services office, located in the Center for Health and Counseling. The student must provide documentation of the disability. Disability Services will then notify Kriya Dunlap of special arrangements for taking tests, quizzes, and doing lab work.

Grading:	OWL Homework	100pts
	Laboratory	100 pts (10 pts each)
	Exam (2)	200 pts (100 pts each)
	<u>Final Exam</u>	<u>200 pts</u>
	Total	600 pts (max.)

Course percent grade: (points earned/ max total points) x 100

Letter Grade	Percentage Grade	Total Points
A+	94.5 - 100	567 - 600
A	90.5 - 94.4	543 - 566
A-	87.5 - 90.4	525 - 544
B+	84.5 - 87.4	507 - 524
B	80.5 - 84.4	483 - 506
B-	77.5 - 80.4	465 - 482
C+	74.5 - 77.4	447 - 464
C	70.5 - 74.4	423 - 446
C-	67.5 - 70.4	405 - 422
D+	64.5 - 67.4	387 - 404
D	60.5 - 64.4	363 - 386
D-	57.5 - 60.4	345 - 362
F	57.4 or lower	344 or lower

The grades will not be curved but individual effort will be noted.

CHEM 103 TENTATIVE SCHEDULE

Date	Day	Chapter / Pages		Lecture	Homework	Lab Experiment
09/04	Th			Syllabus, Introduction		
09/09	T	1	1 -16	Measurements, conversion factors, States of matter	OWL Ch 1	No Lab this week
09/11	Th	1,2	17- 24, 29-39	Energy, Dalton's theory, atoms	Due 9/14/08	
09/16	T	2	40-50	Periodic table, electron configurations	OWL Ch 2	Chemical health and safety
09/18	Th	2	51-57	Periodic properties	Due 9/24/08	Mandatory attendance!!!
09/23	T	4	93 -103	Octet rule, anions, cations, ionic bond		Lab measurements
09/25	Th	4	104-110	Covalent bond, Lewis structures		and COKE density
09/30	T	4	111-114	Octet rule exceptions; resonance	OWL Ch 4	Heat capacity of an
10/02	Th	4	115-122	Nomenclature, bond angles, polarity	Due 10/05/08	unknown metal
10/07	T			Exam Review		Introduction
10/09	Th			Exam 1 (Chapter 1,2,4)		to spectroscopy
10/14	T	5	129-134	Reactions, moles		Lewis structures
10/16	Th	5	135-141	Balancing rxn, stoichiometry		
10/21	T	5	142-144	Limiting step, yield	OWL Ch 5	The empirical formula of
10/23	Th	5	145-154	Redox reactions, heat of reaction	Due 10/26/08	a compound
10/28	T	6	160-170	States of matter, gases	OWL Ch 6	Determination of the
10/30	Th	6	171-181	Intermolecular forces	Due 11/06/08	formula of a metal oxide
11/04	T	6	182-186	Liquids, solids, phase changes		Comrades,
11/06	Th	7	192-202	Solutions, solubility, concentration	OWL Ch 7	start your airbags!!!
11/11	T	7	203-217	Colloids and colligative properties	Due 11/16/07	Colligative properties
11/13	Th			Exam Review		
11/18	T			Exam 2		The eleven solution
11/20	Th	8	223-233	Reaction rates		problem
11/25	T	8	233-245	Chemical equilibrium	OWL Ch 8	No lab this week
11/27	Th			Thanks giving Holiday	Due 12/01/07	
12/02	T	9	251-261	Acids and bases	OWL Ch 9	pH and buffers
12/04	Th	9	262-272	pH, titrations	Due 12/12/07	
12/09	T	9	273-279	Buffers		CHEM 105 placement test
12/11	Th			REVIEW		
12/16	T			8 – 10 am FINAL EXAM		

