ANOKA-RAMSEY COMMUNITY COLLEGE COURSE SYLLABUS

Course:	Chemistry 1062 — Principles of Chemistry II, 4 credits, Summer Session II 2008
Prerequisites:	MATH 0210 with a grade of C or better, appropriate score on math placement test, or equivalent. CHEM 1061 with a grade of C or better, high school chemistry, or equivalent. MATH 1200 is very highly recommended.
Lecture Instructor:	Professor Lance S. Lund, Office S206
Contact Information:	763.433.1273 lance.lund@anokaramsey.edu (the best place to contact me)
Internet Resources:	http://webs.anokaramsey.edu/lund http://anokaramsey.ims.mnscu.edu (**D2L**: quizzes, discussion boards)
Office Hours:	M, T, W, R 7:20 - 7:50 am T, R 1:10 – 1:40 pm (Note: Office Hours subject to change)
Chem Lab Manager:	David Stephan, Office S221, 763.433.1188, david.stephan@anokaramsey.edu

COURSE OUTCOMES

Upon completion of the course, the student should be able to:

1. understand and explain general chemical principles using proper chemical vocabulary and nomenclature.
2. demonstrate an understanding of chemical reactions and equilibrium.
3. solve a wide variety of chemistry problems.
4. perform standard laboratory procedures and experiments.
5. associate lecture topics with laboratory procedures and practical applications.

MATERIALS NEEDED

Textbook: General Chemistry, 8th edition, Darrell D. Ebbing, Steven D. Gammon
Lab Activities: Available at http://webs.anokaramsey.edu/chemistry and http://webs.anokaramsey.edu/lund
Labs must be **downloaded and read before coming to lab** each meeting
Bound Lab Notebook
Scientific calculator

ADDITIONAL RESOURCES

Study Guide and Solutions Manual
Website Links: Available at http://webs.anokaramsey.edu/chemistry and http://webs.anokaramsey.edu/lund
Student Text Website: http://college.hmco.com, then select "Chemistry" (passkey required)
Online Tutoring from smartthinking.com: see Technology package for more information
On-Campus Tutoring: Link to schedule posted at http://webs.anokaramsey.edu/lund and at the Academic Support Center

LABORATORY

Laboratory attendance is mandatory and experiments must be performed at the assigned time. If you must be absent, including for an illness, notify the professor in advance. *Make-up labs may be arranged during the other scheduled lab period, on a space-available basis, during the period in which they are performing the same lab only.* If you miss a lab, or are unable to make it up during the other lab period, it will count as a ZERO. However, the lowest laboratory score for the semester will be dropped. Students missing three labs will have their grade reduced by one full letter grade. Students missing four labs will have their grade reduced by two full letter grades. Students missing five or more labs will fail the course. (Note: The Lab Project counts as five labs.)

Laboratory reports will be due at the beginning of your assigned lab period the next time you meet for lab. A portion of the total points will be deducted for each day a report is turned in late. Laboratory reports more than one week late will receive a ZERO. Prelab assignments (if any) must be completed by the beginning of the laboratory period in

which the experiment will be performed. They may not be turned in late. Lab quizzes may be administered. Students will either work individually or in pairs. There will be no groups of three or more, unless assigned by the professor. A laboratory course should involve as much "hands-on" work as possible for each student.

CONDUCT AND ATTENDANCE

I believe in conducting my course with mutual respect amongst all of us. In particular with large classes, I request that you arrive and find a seat before the scheduled start time and do not pack up any of your materials until class time is over. I strive to start and end each class on time. If you arrive late, please enter the rear door and find a seat near the back, if possible. Please refrain from socializing, making comments, or noises when other people are speaking, including the professor. Turn off the sound to all cell phones, pagers, headsets, or other electronics. **Cell phones and pagers must be turned completely off on exam days and must be removed from sight.** Disruptive students may be removed from class and may not return until meeting with Karen Kraft, Dean of Educational Services, and meeting the guidelines set forth in the Student Code of Conduct.

While I do not take attendance, class attendance is expected by college policy. Students are responsible for all information and assignments given in class. Large numbers of absences usually results in poor or failing grades. Please contact the professor in advance if you know you will be absent.

Students requiring accommodation for a disability must visit the instructor in a timely manner to ensure the accommodations may be made. Students requiring accommodation for sincerely held religious beliefs and/or for observance of religious events that conflict with class requirements must inform the instructor of the need for these accommodations during the first week of class.

ASSIGNMENTS AND QUIZZES

Reading assignments are found elsewhere in this syllabus. It would be very helpful if the reading assignments are completed prior to the class period in which that material is covered. The reading assignments are accompanied by **suggested problem assignments**. You should plan to work on these assignments while the related topics are covered in class. *You will be expected to have all of the problems for a particular chapter completed by the class session that follows the session that the chapter is completed in lecture.* Students should take the initiative to keep up with their work in order to prepare themselves for quizzes and exams.

There may be **quizzes** during the term in class. **IF** administered, in-class quizzes will be worth 10 points each, and may be announced or unannounced. Make-up quizzes will be at the discretion of the professor and are not guaranteed. **D2L Homework Quizzes** (http://anokaramsey.ims.mnscu.edu) will be assigned for every chapter. The assignments will be scored electronically and will be worth 5 points each. D2L Homework Quizzes correspond primarily to problems taken directly from your text.

EXAMS

Only those topics covered in the lecture, laboratory, reading assignments, or problem assignments will appear on the exams. Exams must be taken at the scheduled time. *There will be **NO** make-ups for the one-hour exams*, with the exception of school-sponsored activities/events (must give at least two weeks advance notice) or conflicts with sincerely held religious beliefs/events (must inform professor during the first week of class). Furthermore, these exceptions will only be granted with verifiable documentation. Please do not ask for any other exceptions. If you are ill, have a planned vacation, get a flat tire on your way to school, or are otherwise unprepared or absent for an exam, that exam will count as a zero. You should try your very best for each exam, since unplanned events may prevent you from taking a future exam. There will be four one-hour exams plus the final. Make-ups may be allowed for the Final Exam if the professor has been consulted in advance.

EXTRA CREDIT

In general, I am not a believer in extra credit. *However, there **may be** a chance to earn extra credit during the term.* **IF** any extra credit is offered during the summer term, it will be announced in lecture, and there will be no other opportunities available. *You must also bring to class some sort of proof that any extra credit activities were actually performed, in the form of physical evidence, photos, etc,* as well as a short report on your extra credit. Late extra credit assignments will NOT be accepted.

LABORATORY PROJECTS

Will be presented during your laboratory period on August 5th or 6th. Information on your projects should be distributed near the beginning of Week 3. Ask the professor for more information, if you would like an early start.

STUDYING

It is very important that you *discipline* yourself to become an organized, conscientious student who studies regularly (daily). Last-minute cramming for cumulative exams usually results in a poorer understanding of concepts and lower exam scores. You should view difficulty as a challenge to overcome and mediocrity as *unacceptable*.

KEEPING TRACK OF YOUR PROGRESS IN THIS COURSE

You may use the table below to keep track of your scores. To determine where you stand in the course, divide the total of your points earned by the total number of points possible. Then multiply by 100. This will give you a percentage, which you can use to determine your letter grade.

Item	Points Earned	Points Possible
Writing Tools		
Organic Models		
Functional Groups		
Solubility Curves		
F.P. Depression		
Kinetics		
Equilibrium		
pH		
Titration Curves		
Lab Project		
Hskpng/Notebook		
HW E		
HW 24		
HW 11		
HW 12		
HW 14		
HW 15		
HW 16		
HW 17		
HW 18		
HW 19		
HW 20		
HW 21		
Exam 1		
Exam 2		
Exam 3		
Exam 4		
Final Exam		
Other		
Totals		

GRADES

1.	Laboratory	about 155 points
2.	Homework/Quizzes/Other	about 55 points
3.	Three highest one-hour exam scores	300 points
4.	Final Exam	200 points
Total		**about 710 points**

The final grade will be based on a total point system with the following letter grades:

A 90.0 % and above

B 80.0 - 89.9 %

C 70.0 - 79.9 %

D 60.0 - 69.9 %

F below 60.0 %

CHEMISTRY 1062 ASSIGNMENTS

Note: The suggested problem assignments listed below should be considered the *minimum* number of problems that should be completed in your studies. Additional practice should make you more proficient with the course material. Additionally, you will be assigned graded homework problems taken primarily the text on D2L.

Chap	Title	Reading Assignments	Study Questions (End-of-Chapter)
24	Organic Chemistry	All sections	#1, 2, 4, 11, 12, 14, 19, 21, 23, 25, 27abc, 29, 33, 35, 37, 39, 43, 45, 47, 49, 51, 53, 55, 57, 59, 61, 67, 70
11	States of Matter; Liquids and Solids	All sections, except pp. 428-429	#3, 6, 10, 12, 13, 15, 23, 27, 29, 37, 41, 47, 49, 57, 65, 69, 75, 79, 81, 83, 87, 88, 91, 95, 99, 109, 121, 126, 128, 129
12	Solutions	All sections	#3, 4, 8, 10, 16, 17, 20, 21, 23, 27, 35, 43, 49, 57, 63, 69, 73, 77, 85, 95, 101, 111, 118, 119
14	Rates of Reaction	All sections	#2, 6, 7, 8, 10, 15, 18, 20, 25, 27, 29, 33, 37, 41, 45, 47, 51, 57, 67, 75, 77, 81, 87, 91, 93, 97, 103, 115, 123, 129, 130
15	Chemical Equilibrium	All sections	#1, 4, 6, 7, 12, 13, 20, 25, 29, 33, 37, 43, 49, 51, 55, 59, 61, 63, 65, 67, 69, 73, 83, 91, 97, 105, 109, 112, 114
16	Acids and Bases	All sections	#5, 8, 10, 14, 17, 21, 23, 27, 29, 33, 39, 43, 47, 61, 67, 69, 71, 79, 91, 93, 103, 107, 109
17	Acid-Base Equilibria	All sections	#4, 7, 14, 17, 18, 23, 24, 29, 31, 35, 39, 45, 47, 53, 55, 59, 61, 65, 69, 71, 79, 81, 87, 97, 98, 107, 113, 115, 125, 133, 134
18	Solubility and Complex-Ion Equilibria	18.1-18.2	#1, 2, 14, 19, 23, 27, 31, 33, 35, 37, 75, 107, 108
19	Thermodynamics and Equilibrium	All sections	#2, 6, 11, 15, 17, 21, 23, 25, 29, 33, 37, 39, 47, 51, 55, 63, 65, 77, 79, 91, 101, 103, 108
20	Electrochemistry	Review 4.5-4.6 All sections in Ch. 20	Ch. 4, #11, 49, 51, 55; Ch. 20, #1, 2, 11, 12, 13, 14, 15, 17, 19, 21, 27, 29, 31, 35, 37, 39, 43, 49, 53, 57, 63, 65, 69, 75, 79, 89, 95, 111, 119, 125, 131
21	Nuclear Chemistry	Al sections	#1, 2, 4, 7, 11, 12, 13, 17, 19, 21, 23, 25, 27, 29, 31, 33, 37, 39, 43, 45, 47, 49, 51, 53, 55, 57. 61, 65, 67, 69, 71, 75, 77, 79, 81, 83, 87, 89, 91, 93, 95

Chem 1062 Lecture, Exam, and Lab Schedule

Changes and updates to this schedule will be announced in class and posted at http://webs.anokaramsey.edu/lund.

Lab	Monday	Tuesday	Wednesday	Thursday	Friday
Writing Tools	Jul 7	Jul 8	Jul 9	Jul 10	Jul 11
Organic Modeling	Ch 24	Ch 24/11	Ch 11	Ch 11/12	
Organic Func Groups	(120)	(80 /40)	(120)	(40/80)	
Solubility Curves	Jul 14	Jul 15	Jul 16	Jul 17	Jul 18
F.P. Depression	**Exam 1**	Ch 12/14	Ch 14	Ch 14/15	
Kinetics	Ch 12 (60)	(60 /60)	(120)	(20/100)	
Equilibrium	Jul 21	Jul 22	Jul 23	Jul 24	Jul 25
pH	Ch 15/16	**Exam 2**	Ch 16/17	Ch 17	
Lab Project	(50/70)	Ch 16 (60)	(20/100)	(120)	
Titration Curves	Jul 28	Jul 29	Jul 30	Jul 31	Aug 1
Lab Project	Ch 17/18	**Exam 3**	Ch 19/20	Ch 20	
Lab Project	(30/90)	Ch 19 (60)	(90/30)	(120)	
Lab Project	Aug 4	Aug 5	Aug 6	Aug 7	Aug 8
Lab Project	Ch 20/21	**Exam 4**	Ch 21/Review	**Final Exam**	
	(100/20)	Ch 21 (60)	(60/60)		

You should be able to make plans according to the schedule above, except in the instance of unforeseen circumstances. The numbers in parentheses indicate the approximate amount of time that will be spent on that chapter in minutes. On days for which exams are scheduled, the exam will be administered during the first half of the class meeting (8:00-9:00). The second half (9:10-10:10) will be used to cover new material.

You will be performing three lab activities per week, in the order given in the first column. There will only be two lab meetings during the final week of the session.

The expected material covered on each of the exams is listed below. However, the amount of material on the exams may differ, depending on the amount of time actually spent on each topic. Also, only those topics covered in lecture, in the reading assignments, or the problem assignments will appear on the exams.

Exam 1	Chapters 24, 11, 12 (~1st half)
Exam 2	Chapters 12 (~2nd half), 14, 15
Exam 3	Chapters 16, 17, 18
Exam 4	Chapters 19, 20, 21 (1st section or two)
Final Exam	Cumulative – ACS Standardized Final Covering the Entire Two-Semester Sequence

D2L

D2L Homework Quizzes will be assigned for every chapter. The assignments will be scored electronically and will be worth 5 points each. A large majority of D2L problems will correspond to problems (even-numbered) taken directly from your text. You will be allowed up to two submissions on each assignment. You may log on to D2L at http://anokaramsey.ims.mnscu.edu.

If this is the first course in which you have used D2L, you may go to: **http://www.anokaramsey.edu/IT/D2L_studentmanual.cfm** to obtain information on accessing and utilizing the system. If you scroll about halfway down this page, you will find instructions for the initial D2L login.

Username
Your username is your student ID (Tech ID) number. You should include any leading zeroes in your student ID.

Initial Password
Your initial password will be one of the following:

- Birthdate in YYMMDD format (i.e. 800105, for January 5, 1980)
- The last six digits of your social security number
- If neither of the above work leave it blank

You should change your password with the first login. You will also need to activate (www.metnet.edu/initiate) and have access to your MetNet (www.metnet.edu) email account in the event you forget or lose your D2L password.

Tips for Using D2L

1. An answer in **scientific notation**, such as **5.6×10^{-6}**, should be entered as **5.6E-6**.

2. Numerical answers will usually require the correct number of **significant figures**, so pay close attention to significant figures when answering questions.

3. A formula of **H_2O** should be entered as **H2O**. A formula of **K_3PO_4** should be entered as **K3PO4**.

4. Parentheses in chemical formulas should be used only when necessary. **$Mg(OH)_2$** should be entered as **Mg(OH)2**. Do **not** write **Na3(PO4)** for sodium phosphate**, Na_3PO_4**, since parentheses are **not** necessary. If you include parentheses for sodium phosphate, D2L will mark your answer wrong.

5. **Roman numerals** use capital **I**'s and **V**'s. For example, the name for **$CuCl_2$** would be entered as **copper (II) chloride**. The name for **SnF_4** should be entered as **tin (IV) fluoride**.

6. When **balancing equations**, put a **1** in front of chemical formulas, even though we don't normally write a **1** when balancing/writing by hand.

   Example: $CH_4 + 5\ O_2 \rightarrow CO_2 + 2H_2O$ In this case we don't normally put a **1** in front of the **CH_4** or **CO_2**, but when asked for the coefficient for each substance, you should enter a **1** where there is not a coefficient.

7. **Read the directions carefully and answer what is asked**. Occasionally you may have to give an answer that will be hand graded by the professor.

8. If you discover any mistakes, inform the professor ASAP, in order to correct them before other students encounter them.

Student E-mail Accounts

Anoka-Ramsey Community College (ARCC) uses your **ARCC-assigned email account** as the **primary** method of communicating with you. Via email, you will receive messages about class cancellations, class assignments, registration dates, payment deadlines, etc. **Don't miss this information!**

It is your responsibility to initialize your account,
and read and respond to critical notices from the college.
ARCC will send email announcements only to your ARCC-assigned email account.