

Chemistry 270
Quantitative Analysis
Syllabus Spring, 2008

<u>Week</u>	<u>Dates</u>	<u>Topics</u>	<u>Text Chapter</u>
1	2/11-2/15	Intro, data handling, statistics	1, 2
2	2/18-2/22	Hypothesis testing, sampling	2
3	2/25-2/29	Titrimetry, soln chem, activity	9
4	3/3-3/7	Equilibrium calcs, methods	11
5	3/10-3/14	Advanced A-B	11
6	3/17-3/21	A-B titrimetry	12
7	3/24-3/28	****Spring Break****	
8	3/31-4/3	A-B topics, solubility	13
9	4/7-4/11	Complexation equilibria	14
10	4/14-4/18	Colorimetry	20
11	4/21-4/25	Colorimetry, instrumentation	20
12	4/28-5/2	Separations and Chromatography	22
13	5/5-5/9	Chromatography	22, 23
14	5/12-5/16	Chromatography (LC), Electrophoresis	25, 26
15	5/19-5/21	Summary, prep for final exam	

Text: L.W. Potts and J.F. Evans, *Quantitative Chemical Analysis: An Equilibrium Approach*, Volumes I and II, Fourth Edition, 2004-2008. Girth Bros. Press, St. Peter, Minnesota.

Lab Manual: L.W. Potts, *Laboratory Manual for Chemistry 270, GAC*, 2008. (Green cover)

Class meets 11:30-12:20 on M,W, R, F. Lab lecture days are Fridays or as announced.

Exams will be given at approximately three-week intervals starting in week 3. There will be three or four one-hour exams (depending on progress) and a two-hour comprehensive final exam.

Problem sets will be assigned during the semester. Selected problems will be graded. Solutions will be put on electronic reserve on the Moodle server (<https://moodle.gac.edu>). Grades for problems will count the same as one exam in determining the final grade. Students may collaborate on these problem sets, despite the fact that they are graded. Late problem sets will be accepted at the discretion of the instructor.

Grades in the course will be determined 50% by lab and 50% by exam/problem set scores. Each hour exam will count one sixth of the exam grade. Each lab score will count one ninth of the lab grade. *Students must pass both lab and exam portions of the course to earn a passing grade in the course.* The grading scale will be:

A	100 - 86	C	60 - 66
A-	83 - 85	C-	57 - 59
B+	80 - 82	D	50 - 56
B	74 - 79	F	0 - 49
B-	70 - 73		
C+	67 - 69		

Incompletes: A grade of *I* will be given only if a student is physically unable to attend class. A note from the Dean of Students confirming this is necessary. An *I* will not be given for simply not completing the work by the end of the course.

Conflicts: If a student has a conflict for an exam or lab, arrangements *must* be made for completing the work before the conflict actually occurs. An unexcused absence from an exam will result in a grade of 0 for the exam, without exceptions.

Honor Code: Every Gustavus Adolphus College student is required to sign the following statement before final admittance into the College:

"As a community of scholars, the faculty and students of Gustavus Adolphus College have formulated an academic honesty policy and honor code system, which is printed in the Academic Bulletin and in the Gustavus Guide. As a student at Gustavus Adolphus College I agree to uphold the honor code. This means that I will abide by the academic honesty policy, and abide by decisions of the joint student/faculty Honor Board."

The following pledge will be written in full and signed on every examination and on other work specified by your instructor:

"On my honor, I pledge that I have not given, received, or tolerated others' use of unauthorized aid in completing this work."

Problem sets in this course are exempt from the code (although independent work is encouraged for pedagogical purposes). The code applies to laboratory work, although signatures are not required on lab card reports. It is understood that the Honor Code applies with or without a signature.

Violation of the Honor Code will result in failing a lab experiment, failing an examination, or possibly failing the course. Students who dispute an allegation of academic dishonesty may request a hearing before a joint student/faculty honor board, as described in the college catalog.