

Analytical Chemistry: CHEM 321

Spring Semester 2015

Class Schedule

Lecture Meeting Times: MWF (9:00-9:50 am)
Location: S-059

Staff

Professor: Stephen F. Wolf
Office: Science Building, Room 051K
Office Phone: 812.237.2236
Office Hours: MWF 10-11 or by appointment
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Course Description

Chemistry 321 is an introduction to the principles and practices of quantitative analytical chemistry. The course covers the fundamentals of statistical data analysis; application of the theory of chemical equilibrium to gravimetry, titrimetry, and electrochemistry; chemical separations; and an introduction to spectroscopy. Throughout the semester emphasis will be placed on applying these fundamentals to solving problems typical to those encountered by analytical chemists.

- Prerequisites: prior successful completion of CHEM 106 and CHEM 106L
- Co-requisite: current enrollment in or prior successful completion of CHEM 321L
- Course credit: 3 credit hours

Required Course Material and Equipment

- Textbook: Fundamentals of Analytical Chemistry - 9th Edition, D. A. Skoog, D. M. West, F. J. Holler, S. R. Crouch, Brooks/Cole, Belmont, CA, U.S.A. (2014) ISBN-13: 978-0-495-55828-6.
- Sapling Learning Interactive Homework and Instruction: Analytical Chemistry, Austin TX U.S.A. (2014) ISBN-13: 978-0-9833859-5-0.
- Calculator: You will need a handheld scientific calculator with the capacity for scientific notation, logarithms (log and ln) and exponentiation (e^x , 10^x , y^x).

Sources of Information

- Lectures
- Textbook
- Additional Handouts
- Class Bulletin Board: outside Room 051K
- Class Web Page: <http://carbon.indstate.edu/wolf/chem321/chem321.html>

Sources of Credit

Your performance will be evaluated by the scores received on homework, exams, and a final exam as described below. In all cases it is required that you show your work to receive full credit for your answers.

Exams: Five exams will be given in this class: four exams will be given during the regular semester and a fifth final comprehensive exam will be given during finals week.

Homework: Homework problems will be regularly assigned from the on-line program "Sapling Learning Interactive Homework and Instruction: Analytical Chemistry." Students are responsible for working and comprehending the assigned problems by the due date. Problems can be repeated in an attempt to earn a higher score. Homework turned in after the due time/date **typically** will not be accepted unless prior

arrangements have been made with the instructor. Additional information about Sapling Learning Interactive Homework and Instruction can be found at <https://www.saplinglearning.com>. It is recommended that you read the FAQ prior to starting use of this program.

Credit Breakdown by Category

Exam 1	12.5%
Exam 2	12.5%
Exam 3	12.5%
Exam 4	12.5%
Final Exam	25.0%
Homework	25.0%
Total	100%

Letter Grade Assignment

Letter grades will be based on the total percentage of points obtained from the above sources of credit. The tentative scale is:

Letter Grade	Percent Score
A+	Score \geq 96%
A	$92\% \leq$ Score $<$ 96%
A-	$88\% \leq$ Score $<$ 92%
B+	$84\% \leq$ Score $<$ 88%
B	$80\% \leq$ Score $<$ 84%
B-	$76\% \leq$ Score $<$ 80%
C+	$72\% \leq$ Score $<$ 76%
C	$68\% \leq$ Score $<$ 72%
C-	$64\% \leq$ Score $<$ 68%
D+	$60\% \leq$ Score $<$ 64%
D	$56\% \leq$ Score $<$ 60%
D-	$52\% \leq$ Score $<$ 56%
F	Score $<$ 52%

This letter grade assignment scale may be modified at the end of the semester on a percentile basis at the instructor's discretion. This correction is typically based on the 96th percentile grade for the class with a maximum of a 4% correction. The letter grade assignment scale listed above represents therefore, upper-limits for the final grade assignment scale. A final grade of "A+" can only be earned if your final percent score exceeds 96%.

Attendance

Students who are in good health are expected to attend all classes. The consequences of missing a class include missing assignments, information, and other opportunities that will assist in your successful completion of this course. However, if you are ill and potentially contagious, please do not attend class. You will be given opportunities to make up material missed due to legitimate illness. If you know ahead of time that you will not be able to attend a class please inform me as soon as you are reasonably able.