

CHE 350-001: Instrumental Analysis Spring 2006

Instructor: Dr. Heather Bullen

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Text: Principles of Instrumental Analysis; Skoog, Holler, and Nieman, 5th Edition

Blackboard: Blackboard will be used in this course to post lecture materials, assignments and other information pertinent to the course.

Class Times: 1:00-1:50 pm MW, SC 402

Prerequisite: CHE 340-340L

Co requisite: CHE 350 L

Office Hours: I have an open door policy. Please stop by if you ever have questions, or contact me if you want to set up an appointment. My formal office hours are: M, W: 9-10 am and F: 1-2 pm

Objectives: Obtain a sound understanding of the fundamental principles of instrumental methods of chemical analysis.

Attendance: NKU policy states that class attendance is mandatory. Regular attendance is expected and tardiness is not tolerated. Material at times will not come directly from the text so it is important to come to class. CHE350 and 350L are to be taken simultaneously. Students with more than 4 absences from lecture (unless a valid excuse is given) will be dropped from both lecture and lab by the instructor.

Exams: There will be three exams (Wednesday 2/8, Wednesday 3/15, Monday 4/17) and a Final Exam (Wednesday 5/3 1-3 pm) during the semester. The final exam will be cumulative. **No** make up exams will be given. A student missing an exam must notify the instructor in advance. On the instructor's discretion, the student may use the final exam score to count for one exam. This policy only applies to one exam.

Homework: Homework problems will be handed out during the course. These problems are designed to help ensure your understanding of the material presented in the lecture and prepare you from the exams.

Quizzes: Short in-class quizzes will be given throughout the semester. These quizzes may be announced or unannounced to address students preparedness for lecture and the understanding of the course material. Make up quizzes will not be given and the lowest quiz score will be dropped.

Grading Scheme:

Exam 1	= 16%
Exam 2	= 16%
Exam 3	= 16%
Final Exam	= 26%
Homework	= 16%
Quizzes	= 10%

Grading Scale: The letter grade for the course will be based on the final percentage scale

<u>Course Grade</u>	<u>Percentage</u>
A	90-100
B	80-89
C	70-79
D	60-69
F	0-59

Honor Code: The NKU Honor Code is in effect for this course. Failure to comply will result in a zero grade. <http://www.nku.edu/~deanstudents/HonorCode.htm>

Note: The syllabus is subject to change. Students are responsible for understanding all items on this syllabus. Any items not understood must be brought to the attention of the instructor within the first two weeks of class.

TENTATIVE COURSE OUTLINE

Topic	Chapters
Measurement Basics: Performance Characteristics, Figures of Merit Electrical Components and Circuits, Operational Amplifiers, Digital Electronics, S/N ratios	1-5
Separation Methods: Gas Chromatography, HPLC, Electrophoresis	26, 27, 28, 30
Atomic Spectroscopy: Components of Optical Instruments, Atomic Absorption Spectrometry, Atomic Emission Spectrometry	6, 7, 9, 10, 11
Molecular Spectroscopy: Luminescence Spectroscopy, Applications of Infrared Spectroscopy, Raman Spectroscopy, Mass Spectrometry, Surface Characterization	15, 17, 18, 20, 21

Policies of the Department of Chemistry at Northern Kentucky University

- All items on syllabi are subject to change by the instructor.
- Students are responsible for reading and understanding all items on the syllabi. Any items not understood must be brought to the attention of the instructor within the first two weeks of class.
- The work you will do in any course is subject to the Student Honor Code. The Honor Code is a commitment to the highest degree of ethical integrity in academic conduct, a commitment that, individually and collectively, the students of Northern Kentucky University will not lie, cheat, or plagiarize to gain an academic advantage over fellow students or avoid academic requirements.
- Cheating will not be tolerated. In accordance with the Code of Student Rights and Responsibilities, faculty members have the right to determine actions to be taken when a student is caught cheating.
- Faculty members reserve the right to dismiss or to have removed a disruptive student from their classrooms