

The focus of this Instrumental Analysis course is on preparation of samples, operation of instrumentation, and interpretation of spectra. *There will not be any lectures in this course.* Do the reading and try the problems before class. Come to class prepared to ask questions. If you are not prepared, class time will not be productive for you (and you will find the next quiz difficult). Do not wait until the night before the quiz to start studying.

You may also need to find a regular additional time you can work in lab. In general you will be working on more than one experiment each week. You may turn in up to two lab reports by 4:00 Friday on indicated weeks. (Late reports will count for the following week). The grade scale is based on 6 lab reports; extra experiments count as extra credit. See page 141 in the *Notes* for more detail and a description of the lab reports.

Thursday			
August 29	Read Preface	LAB	
September 5	Read Chapter 1 SWKB 3.1-3.5,3.8-3.14	LAB	Friday: Lab 1 due
September 12	Chapter 1 QUIZ	LAB	Friday: Lab 1-4 due*
September 19	Read Chapter 2 SWKB 3.6-3.7	LAB	
September 26	Chapter 2 QUIZ	LAB	Friday: Lab 1-6 due*
October 3	Read Chapter 3, 5 SWKB 3.16, 4, 6	LAB	
October 10	Chapter 3, 5 QUIZ	LAB	Friday: Lab 1-7 due*
Midterm			
October 24	Read Chapter 4 SWKB 5	LAB	
October 31	Chapter 4 QUIZ	LAB	Friday: Lab 1-12 due*
November 7	Read Chapter 6 SWKB 2	LAB	
November 14	Chapter 6 QUIZ NNIN	LAB	Friday: Lab 1-18 due*
November 21	Read Chapter 7	LAB	
Thanksgiving			
December 5	Chapter 7 QUIZ	LAB cleanup	Friday Lab 1-18 due*
December 13	Final Exam (9:00)		

*Maximum of 2 labs can be handed in per due date.

SWKB is Silverstein, Webster, Kiemle, Bryce, *Spectrometric Identification of Organic Compounds*. Readings are chapters or section numbers from the 7th or 8th edition. This classic book is recommended but not required. Most professional chemists use this book as a reference. Its strengths include the spectral tables, the approach of using more than one kind of spectra to elucidate structure, and the very large number of examples and worked problems. Do not bother to rent this text. Buy a used copy you can afford to keep.

The course web page has links to additional useful references.

<https://chem.beloit.edu/classes/Chem225/index.html>

Points in this Course

6 quizzes (30 points each) 6 lab reports (26 points each) Final (60 points)

If you have a disability and need accommodations, contact Learning Enrichment and Disability Services located on 2nd floor Pearsons (north side), 608-363-2572, learning@beloit.edu, or olesena@beloit.edu. Obtain an Access Letter from LEADS and then we will discuss how to implement the accommodations.