



8. The course's content will be provided through [Blackboard](#). Be sure to check your browser in advance to verify that you have the proper setting to be able to access all the posted material. If you need help, you can also contact the *Blackboard* office (SB 4.03.04 / 458-7376). As much as is possible I will try to post the course material on *Blackboard*.

**Grades and Quiz Schedule:** Quizzes about every other week (**50%**). Quizzes will be comprehensive. A final Quiz will be given during the scheduled final examination time (**20%**). The lowest quiz grade will be dropped. Make up quizzes will be given at the discretion of the instructor. A score of 0 will be given for missed quizzes.

**Homework:** The homework will be collected randomly and graded (**10%**). It is the student's responsibility to master these problems. Homework problems will be typical of the quiz problems and therefore are excellent practice for the quizzes.

**Journal Articles:** Journal articles will be assigned from the current literature to highlight the class discussion, usually every two weeks. Articles will be discussed in class and covered on quizzes. A critic (1 to 2 pages) will be submitted by the student (**20%**).

The listed chapters in the syllabus are for reference. If you need the necessary background material for the literature discussions you can go to those chapters before class. In class we will be focusing on those techniques using the current literature.

**Grading Scale (approximate)**

A	> 90
B	89 to 80
C	79 to 70
D	69 to 60
F	< 59

"This Syllabus is provided for informational purposes regarding the anticipated course content and schedule of this course. It is based upon the most recent information available on the date of its issuance and is as accurate and complete as possible. I reserve the right to make any changes I deem necessary and/or appropriate. I will make my best efforts to communicate any changes in the syllabus in a timely manner. Students are responsible for being aware of these changes."

**The management reserves the right to change the syllabus as needed during the course of the semester**

## Advanced Analytical Chemistry CHE 5263 Syllabus

Week 1	August 23, ok, only August 25	exam (surprise, sort of), hand out syllabus (well of course), preliminaries, spreadsheet, statistical test,
Week 2	August 30	Error Analysis (again), <u>Experiments in Physical Chemistry</u> , 8 <sup>th</sup> Ed., C.W. Garland, J.W. Nibler, D.P. Shoemaker (2) Why is Analytical Chemistry important? "Masters programs in analytical chemistry", Salzer, R., Anal. Bioanal. Chem., <b>2009</b> , 394, 649-53
Week 3	September 6	<b>Monday, Labor Day Holiday, no class</b> Components of Optical Instruments (7) Molecular Spectroscopy (13)
Week 4	September 13	UV-visible spectroscopy (14)
Week 5	September 20	Introduction to infrared spectroscopy (16), group theory
Week 6	September 27	Applications of infrared spectroscopy (17) and interpretation of spectra
Week 7	October 4	Electroanalytical Chemistry (22)
Week 8	October 11	Nuclear magnetic resonance spectroscopy (19), more group theory
Week 9	October 18	interpretation of spectra and problem solving using IR and NMR, more group theory
Week 10	October 25	Atomic Spectroscopy, Introduction (6), Introduction to Atomic Spectroscopy (8)
Week 11	November 1	Atomic Absorption Spectroscopy (9)
Week 12	November 8	Separation Methods, Introduction (26) Gas Chromatography (27)
Week 13	November 15	Liquid Chromatography (28)
Week 14	November 22	Mass Spectrometry (20) <b>Thanksgiving Holiday November 25 + 26</b>
Week 15	November 29	Review for final quiz
Week 16	December 6 December 13	Student Study Days Final Quiz, 5:00 to 7:30 PM

