Syllabus ***CHEM520: Advanced Analytical Chemistry*** ***Fall 2015***

CREDIT: 3.0 hours

INSTRUCTORS:

Profs.	S. Clark	B. Clowers	P. Reilly	J. Lessmann
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Profs.	A. Li	U. Fittschen	J. Brozik	P. Benny
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Office hours by appointments

TA: Not applicable.

SCHEDULE: Fulmer 150
Monday, Wednesday, Friday 9:10 AM – 10:00AM

Student Learning Outcome: At the end of this course the student should be able to understand different areas of analytical chemistry, including solution chemistry, statistics, instrumental analyses, kinetics, and radiochemistry.

Course Website: Blackboard: https://learn.wsu.edu/
Use you net ID and password to log in. It is your responsibility to check this site regularly.

TEXT: Daniel C. Harris "Quantitative Chemical Analysis", 8th Edition and others as notified. Other reference materials will be used

GRADING: Grades will be based on assignments (e.g. written exam, literature review) given in each section and an oral that will take place during the last 3 weeks of the semester.

GRADE RANGES: (guaranteed minimum grade)

90% A	89% A-	88% B+	80% B	79% B-	78% C+
70% C	69% C-	68% D+	60% D	below 60% F	

COURSE OUTLINE: see schedule below

OUTCOMES AND ASSESSMENTS: Fundamental aspects of the different areas of analytical chemistry will be reviewed, and recent advances from the peer-reviewed chemistry literature will be explored. The course is lecture format and is team-taught by faculty in the Analytical, Environmental, and Radiochemistry (AER) Division of the WSU Chemistry Department. Separate sections will address subject matter in optical spectroscopic techniques, chromatography, mass spectrometry, statistics of analysis, kinetic methods of analysis, electrochemistry, radioanalytical chemistry, and chemical equilibrium. Progresses will be evaluated based on assignments (e.g. written exam, literature review) given in each section and an oral that will take place during the last 3 weeks of the semester.

REQUIRED ASSIGNEMENTS: Assignments include written exams, literature reviews, and oral presentations.

CALCULATORS: Students are expected to have and to be able to use a scientific calculator and spreadsheet software, such as MS-EXCEL.

ATTENDANCE POLICY: Students are strongly encouraged to attend all lectures. Students should notify instructors of upcoming or past absences. Make-up exams will only be allowed at the discretion of each instructor of this course.

Students with Disabilities: Reasonable accommodations are available for students with a documented disability. If you have a disability and need accommodations to fully participate in this class, please either visit or call the Access Center (Washington Building 217; 509-335-3417) to schedule an appointment with an Access Advisor. All accommodations MUST be approved through the Access Center. For more information contact a Disability Specialist

Academic Integrity Students who violate WSU's Standards of Conduct for Students will receive an F as a final grade in this course, will not have the option to withdraw from the course and will be reported to the Office Student Standards and Accountability. Cheating is defined in the Standards for Student Conduct WAC 504-26-010 (3). It is strongly suggested that you read and understand these definitions.

Safety and Emergency Notification: Washington State University is committed to enhancing the safety of the students, faculty, staff, and visitors. It is highly recommended that you review the Campus Safety Plan (http://safetyplan.wsu.edu/) and visit the Office of Emergency Management web site (http://oem.wsu.edu/) for a comprehensive listing of university policies, procedures, statistics, and information related to campus safety, emergency management, and the health and welfare of the campus community.

Schedule *CHEM520* *Fall 2015*

Week	Dates	Instructor	Subject	Module
1	Aug 24-28	S. Clark	Solution Chemistry	1
2	Aug 31-Sep 04	S. Clark	Solution Chemistry	1
3	Sep 07-11 ***Labor Day 9/7***	Clowers	Chromatography	2
4	Sep 14-18	Reilly	Mass Spectrometry	3
5	Sep 21-25	Reilly	Mass Spectrometry	3
6	Sep 28-Oct 02	Lessmann	Statistics	4
7	Oct 05-09	Li	Basics of Spectroscopy	5
8	Oct 12-16	Fittschen	Instrumental Analysis	6
9	Oct 19-23	Fittschen	Instrumental Analysis	6
10	Oct 26-30	Brozik	Kinetics	7
11	Nov 02-06	Brozik	Kinetics	7
12	Nov 09-13 ***Veteran's Day 11/11***	Benny	Radiochemistry	8
13	Nov 16-20	Benny	Radiochemistry	8
14	**Nov 23-27**	-	***Thanksgiving Break***	No Class
15	Nov 30-Dec 04		AER Integration Presentations	9
16	Dec 07-11		AER Integration Presentations	9