

CHEM 4240 2012 Experimental Schedule

Week of	Experiment(s)
January 9	<ul style="list-style-type: none"> • Introduction QA/QC in the laboratory NMR Training, Class Cleaning and Check-in
Wet Chemistry Begins!!!	
January 16	<ul style="list-style-type: none"> • Experiment #18 • Basic Laboratory Skills-Experiments 1 & 2 & 17 “Excel for Laboratory Reports.” and “Using an Analytical Balance and Calibration of Glassware.” and “Quantitative NMR”
January 23	<ul style="list-style-type: none"> • Determination of Chloride by Silver Nitrate Titration. Experiment #3 • Determination of Alkalinity by Titration with Sulfuric Acid -Experiment #4. Collect NMR Spectra For Students
January 30	<ul style="list-style-type: none"> • Gravimetric Determination of Sulfate-Experiment #5 • Turbidimetric Determination of Sulfate Experiment # 6 Collect NMR Spectra For Students
Spectroscopy Begins	
February 6	<ul style="list-style-type: none"> • Additional gravimetric/ preparative tools: Experiments 7 & 8-“Determination of Total Dissolved Solids” and “Determination of Organic Carbon” Turn in individual reports for both experiments. • UV Spectroscopy Introduction: Experiments 9 and 10- “Absorbance vs. transmittance-using a spec 20” and “Absorbance vs. transmittance-using a photodiode detector” Turn in one complete report for both experiments. Collect NMR Spectra For Students
February 13#	<ul style="list-style-type: none"> • Beers Law- Determination of Iron Experiment #11 <hr/> <ul style="list-style-type: none"> • Spectrofluorometry-Experiment #25 • IR Spectroscopy- Experiment #26 Collect IR & NMR Spectra For Students
February 20	<ul style="list-style-type: none"> • Spectrofluorometry-Experiment #25 • IR Spectroscopy- Experiment #26 <hr/> <ul style="list-style-type: none"> • Determination of [H⁺] by a pH Meter and pH indicators -Experiment #13 Collect IR & NMR Spectra For Students

February 27	<ul style="list-style-type: none"> • Determination of the pKa of an Acid -Experiment #14 • Atomic Absorption Spectroscopy: Experiments 15 & 16 “Introduction to Atomic Absorption Spectrometers” and “Determination of the copper and zinc content in penny” <p style="text-align: center;">Collect IR & NMR Spectra For Students</p>
Chromatography Begins	
March 5#	<ul style="list-style-type: none"> • An introduction to ion chromatography and HPLC Experiments 19 and 27 -Plan Group Project. <hr/> <ul style="list-style-type: none"> • Analytical Ion Chromatograph- Experiment #20 • Chromatography Experiment 21-The Effect of Ionic Strength and Flowrate on Ions <p style="text-align: center;">or</p> <ul style="list-style-type: none"> • Experiment #28 HPLC k' vs. eluent strength. • Experiment #29 HPLC quantification. <p style="text-align: center;">Collect IR & NMR Spectra For Students</p>
March 12	SPRING BREAK
March 19#	<ul style="list-style-type: none"> • Analytical Ion Chromatograph- Experiment #20 • Chromatography Experiment 21-The Effect of Ionic Strength and Flowrate on Ions <p style="text-align: center;">or</p> <ul style="list-style-type: none"> • Experiment #28 HPLC k' vs. eluent strength. • Experiment #29 HPLC quantification. <hr/> <ul style="list-style-type: none"> • Gas Chromatography Experiment 24 and catch up on NMR analysis. • <u>Submit Abstract for Scholarship Day</u> <p style="text-align: center;">Collect IR & NMR Spectra For Students</p>
March 26#	<ul style="list-style-type: none"> • Group Project. <p style="text-align: center;">Collect IR & NMR Spectra For Students</p>
April 2	<ul style="list-style-type: none"> • Group Project. <p style="text-align: center;">Collect IR & NMR Spectra For Students</p>
April 9#	<ul style="list-style-type: none"> • Group Project <p style="text-align: center;">Collect IR & NMR Spectra For Students</p>
April 16	<ul style="list-style-type: none"> • Group Project. • April 19. Present at Scholarship Day <p style="text-align: center;">Collect IR & NMR Spectra For Students</p>

April 23	<ul style="list-style-type: none">• Finish Group Project• Lab Final/ ETS Exit Exam
Finals Week	Hand in Laboratory Notebook and Group Project Report