CHE 226 ANALYTICAL CHEMISTRY
LABORATORY SYLLABUS Fall 2010

Laboratory : Mondays (for Sections 1&3) and Tuesdays (for Sections 2&4), 1-4:50 pm, CP 236

Pre-Lab Recitation : Mondays (for Sections 1 & 3) and Tuesdays (for Sections 2 & 4), 1- 1:50 pm, CP-208

Instructor: Dr. Jason DeRouchey

- **Office:** CP 184A
- **Office hours:** Tuesday & Thursday 10:30 am – 12:00 noon or by appointment *(send an email to arrange meeting)*.
- **E-mail:** derouchey@uky.edu **(All emails sent to the instructor must have 226 in the Subject header line)**

Lab Hours : Sections 1 & 3 - Mondays, 1:50-4:50 pm, CP 236
Sections 2 & 4 - Tuesdays, 1:50-4:50 pm, CP 236

Teaching and Laboratory Assistants : Pauline Stratman, Brent Casper, Ting Wang

TEACHING ASSISTANT CONTACT INFORMATION

	Ting Wang	Brent Casper	Pauline Stratman
Office	CP106	A061 (ASTeCC)	Sander's Brown Rm 125
Phone	859-285-9637	859-218-6551	859-257-1412 x 247
E-mail	twa222@uky.edu	brent.casper@uky.edu	Pauline.Stratman@uky.edu
Office Hours	Fri 1-4	Mon 11-12, Wed 10-12	Mon 10-11, Wed 3-4, Thu 2-3

LABORATORY EXPERIMENTS

Expt.	3 Credit Students	4 Credit Students	Grader
1	Laboratory Techniques	Laboratory Techniques	Ting Wang
2	Gravimetric Chloride Analysis	Gravimetric Chloride Analysis	Brent Casper
3	Complexometric Titration of Zinc with EDTA	Complexometric Titration of Zinc with EDTA	Pauline Stratman
4	Determination of Sodium by Flame Atomic-Emission Spectroscopy	Determination of Sodium by Flame Atomic-Emission Spectroscopy	Ting Wang
5	Molecular Adsorption Spectroscopy: Determination of Iron with 1,10-Phenanthroline	Molecular Adsorption Spectroscopy: Determination of Iron with 1,10-Phenanthroline	Brent Casper
6	Molecular Fluorescene Spectroscopy: Quinine Assay	Molecular Fluorescene Spectroscopy: Quinine Assay	Pauline Stratman
7	-----	Identifying a Substance by Acid-Base Titration	Ting Wang
8	-----	Determination of Copper by Electrogravimetry	Pauline Stratman
9	-----	Kinetic Methods of Analysis: Determination of Glucose	Brent Casper

TENTATIVE LABORATORY SCHEDULE

The schedule below is very rough and very tentative. For example, it may take greater or lesser amounts of time to provide you an overview of the experiments. The *instrumental* experiments will be scheduled for you on a specific date later in the semester, and will take only one lab period to complete. However, owing to a lack of equipment, students will be rotated through the experiments. You may be scheduled early in the semester, late in the semester, or both. You are largely "on your own" for Experiments 1-3 (and 7 for the 4-credit students). You must plan ahead and prepare well ahead of time to get them completed in a timely manner. It may take you greater or lesser amounts of time to get them done than the tentative schedule indicates.

The days on which the Pre-Lab Lectures will be given may likely vary. Just keep coming to CP- 208 at 1 pm unless informed otherwise.

While the overall situation in the 226 Laboratory may sound complicated, this is a good experience for you in your future career. Life, even life in a lab, is a lot like this. Professionals have to plan well ahead and then invariably adapt, often to last-minute or emergency situations.

Monday	Tuesday	Pre-Lab Lecture Topics CP 208	In Lab CP 236
08/30	**08/31**	Lab Syllabus Check in procedure Lab Techniques Tour of the Lab	Check in Clean out locker thoroughly Submit Cl^- unknown container Begin Lab Techniques
09/13	**09/14**	Gravimetric Chloride Analysis	Lab Techniques Crush/dry chloride unknown Clean crucibles, dry in oven Submit Zn unknown container
09/20	**09/21**	Gravimetric Chloride Analysis Complexometric Titration of Zinc with EDTA	Weigh out/precipitate/dry chloride samples Finish Lab Techniques Prepare EDTA solution
09/27	**09/28**	Complexometric Titration of Zinc with EDTA	Finish Lab Techniques Prepare Ca standard solution Standardize EDTA solution
10/04	**10/05**	Acid-Base Titration	Finish Gravimetric Cl^- Titrate Zn Unknown Submit Acid unknown container Prepare KHP standard solution
10/11	**10/12**	Acid-Base Titration	Finish Gravimetric Cl^- Prepare/standardize NaOH solution
10/18	**10/19**	Determination of Sodium by Flame Atomic-Emission Spectroscopy	Titrate unknown acid Submit Na unknown container
10/25	**10/26**	Molecular Fluorescene Spectroscopy: Quinine Assay	Finish Na unknown Instrumental experiments
11/01	**11/02**	Molecular Adsorption Spectroscopy: Determination of Iron with 1,10-Phenanthroline	Complete first 4 experiment Instrumental experiments
11/08	**11/09**	4-credit: Determination of Copper by Electrogravimetry	Instrumental experiments
11/15	**11/16**	4-credit: Kinetic Methods of Analysis: Determination of Glucose	Instrumental experiments
11/22	**11/23**	**No Pre-lab lecture**	Instrumental experiments
11/29	**11/30**	**No Pre-lab lecture**	**CHECK OUT ONLY**

***September 6/7, Labor Day- Academic Holiday**