CHEM 636 – INSTRUMENTAL ANALYSIS LABORATORY  
SPRING 2017

Instructor: Prof. Robert Dunn  
Office: 220G MRB  
Phone: (785) 864-4313  
Email: rdunn@ku.edu

Laboratory Director: Dr. Travis Witte  
Email: tmwitte@ku.edu  
Phone: (785)864-3903

Chief Scientific Officers (CSO)

Michael Hogard  
Email: m359h519@ku.edu

Kavisha Ulapane  
Email: k581h718@ku.edu

This lab is organized in a problem-oriented format. You and your classmates will be divided into corporations, government agencies, or consulting firms tasked with solving an analytical challenge requiring instrumental analysis. The lab TAs will be the CSOs of the organizations and help guide the groups towards solving their particular problem. The management team consists of the Instructor, Lab Director, and CSOs. Each week, the management team will meet with each group to discuss progress and future plans. In addition, the groups will make several written and oral reports to their management team, which consist of the CSOs and instructor.

Class Schedule

Each group must arrange a schedule in conjunction with their CSO. The Instrumental Laboratory will be available for use during the scheduled lab (or at the group’s convenience with the consent of the CSO). However, time on individual instruments must be reserved in advance to guarantee availability. The door to the Instructional Instrumentation Laboratory is password protected. You will be held responsible for any damage or loss that occurs while you are in the laboratory! It is your responsibility to report to the Instructor or CSO the presence of any unauthorized individuals in the laboratory.

Grades

Grades will be a combination of individual and group performance with approximately 50% weight allocated for each. Each company’s performance in defining the problem, formulating a plan, and successfully addressing the analytical challenges will be assessed in the group grade. Individual contributions to the successful completion of the project will be assessed in the individual grade. Throughout the semester, individual performance will be monitored by management and through self and group evaluations. Short, weekly reports will also be filed by each student to briefly outline their
contributions that week. The individual and group grade will be combined to arrive at the final grade for each student.

Class Timeline and Milestones

<table>
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<tr>
<th>Week</th>
<th>Description</th>
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<tr>
<td>Week of Jan 16th</td>
<td>Introduction to the course. Lab tour. Students will fill out job applications and be interviewed by Management.</td>
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<tr>
<td>Weeks of Jan 23rd and Jan. 30th</td>
<td>Students will be hired into a company. Groups will do background research on their problem and prepare a plan of study. Tutorials on several instruments will be conducted during lab periods.</td>
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<tr>
<td>Week of Feb. 6th</td>
<td>A written ‘Plan of Study’ report from each group is due to management by 5:00pm. Individual oral reports will be presented during the laboratory period.</td>
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<tr>
<td>Week of March 13th</td>
<td>A written ‘Progress Report’ is due to management by 5:00 pm. Oral reports will be presented during the laboratory period. Individual evaluations by each member of group will be collected.</td>
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<tr>
<td>Week of March 20th</td>
<td>SPRING BREAK – No laboratory access</td>
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<tr>
<td>Weeks of March 27th – April 17th</td>
<td>Complete work and wrap up project.</td>
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<tr>
<td>Week of April 24th</td>
<td>Abstracts are due for the “Eighth International Symposium on Instrumental Analysis Laboratory”. Oral reports will be presented during the laboratory period. Individual evaluations by each member of group will be collected.</td>
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<tr>
<td>May 1st</td>
<td>Attend the “Ninth International Symposium on Instrumental Analysis Laboratory” in Lawrence, Kansas. Each group will give a poster and an oral presentation of their research. Final group reports are due.</td>
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More information about the requirements for each assignment will be provided prior to the assignment due dates. Written assignments are due at 5 PM on the day of your lab in the week they are assigned. They should be emailed to rdunn@ku.edu and to your CSO.

Professional Ethics

As this course is intended to prepare you to function as a professional scientist, proper professional conduct is expected. In this regard your attention is called to the definition of academic misconduct as described in the University Senate regulations:

Academic misconduct by a student shall include, but not be limited to, disruption of classes, giving or receiving of unauthorized aid on examinations or in the preparation of notebooks, themes, reports, or other assignments, or knowingly misrepresenting the source of any academic work.

Disabilities

Any student in this course who has a disability that may prevent him/her from fully demonstrating his/her abilities should contact the Instructor personally as soon as possible so that accommodations necessary to ensure full participation and facilitate the educational opportunity can be established.

KU Core: Chem 636-Instrumental Methods Lab fulfills Goal 6, Learning Outcome 1.