

## **CHEM4400 Advanced Analytical Chemistry**

### **Course Description:**

This course presents important advanced analytical methods and instrument in chemistry. The topics covered include: advanced error analysis; digital electronics; spectroscopic techniques for surfaces; Raman spectroscopy; Fourier transform; centrifugation; capillary electrophoresis; thermal methods; electrochemical analysis; labeling methods; microchip/microarray techniques; flow injection analysis; particle sizing techniques.

### **Pre-requisite:**

CHEM2400 & CHEM3410

### **Main Course Outline (for reference only):**

1. Error Analysis
2. Digital Electronics
3. Spectroscopic Methods I
4. Spectroscopic Methods II
5. Separation Methods I
6. Separation Methods II
7. Electrochemistry Methods
8. Labeling for Analysis
9. Chemical Sensors
10. Size Analysis
11. Microanalysis