## SPRING SEMESTER - 2014

**CHEM 422/622:** Advanced Analytical Chemistry (Separations and Chromatography)  
**Class Schedule:** MWF 8:00 – 8:50, LaT 201  
**Instructor:** D. S. Ballantine, Jr.  
**Office:** Faraday West 424  
**Office hours:** (M-F) 10:00 - 10:50; or by appointment

### TENTATIVE LECTURE SCHEDULE

#### WEEK OF:  
#### TOPIC  
#### CHAPTER

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Chapters</th>
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<tbody>
<tr>
<td>13 Jan.</td>
<td>Introduction/Thermodynamics of Separation</td>
<td>1, 2</td>
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<tr>
<td>20 Jan.*</td>
<td>Thermodynamics/Rate Processes</td>
<td>2, 3</td>
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<td>27 Jan.</td>
<td>Rate/Transport Processes (cont.)</td>
<td>3, 4</td>
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<td>3 Feb.</td>
<td>Zone Formation and Resolution</td>
<td>5, 6</td>
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<td>10 Feb.</td>
<td>Classification of Methods</td>
<td>7</td>
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<td>17 Feb.</td>
<td>Electrophoresis/Sedimentation</td>
<td>8, suppl.</td>
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<tr>
<td>24 Feb.</td>
<td></td>
<td>8, suppl.</td>
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<tr>
<td>3 March</td>
<td>Field Flow Fractionation</td>
<td>9</td>
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<tr>
<td>10 March</td>
<td><strong>SPRING BREAK</strong></td>
<td></td>
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<td>17 March</td>
<td></td>
<td>9</td>
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<tr>
<td>24 March</td>
<td>Chromatographic Methods (intro.)</td>
<td>9,10,11,12, suppl.</td>
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<td>31 March</td>
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<td>7 April</td>
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<td>14 April</td>
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<tr>
<td>21 April</td>
<td>Misc. Methods/Applications</td>
<td>supplemental</td>
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<tr>
<td>28 April</td>
<td></td>
<td>supplemental</td>
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### MATERIALS:


2. Supplemental material which will consist of text books and literature references. When possible, copies of these materials will be placed on reserve in Faraday library.

### EXAMS*:

All exams are “take-home” exams. They will be posted one week in advance of the due date, with tentative due dates listed below:

- **Exam I**  
  - week of Feb. 10th  
  - 100 pts.
- **Exam II**  
  - week of April 21st  
  - 100 pts.
- **Final**  
  - Monday, May 5th (12:00 noon)  
  - 200 pts.

### HOMEWORK/PAPER*:

100 pts. total. To be announced.

### GRADING:

Total points available = 500 pts.

- A > 465(93%)
- A- > 450(90%)
- B+ > 440(88%)
- B > 420(84%)
- B- > 400(80%)
- C+ > 385(77%)
- C > 370(74%)
- C- > 350(70%)
- D = > 300(60%)
- F < 300(60%)

*Exams/homework assignments for CHEM 422 and CHEM 622 will differ, as will overall demonstration of content mastery necessary to earn a given grade.
ACADEMIC POLICIES

1. **Academic Integrity.** Good academic work must be based on honesty. The attempt of any student to present as his or her own work that which he or she has not produced is regarded by the faculty and administration as a serious offense. Students are considered to have cheated if they copy the work of another during an examination or turn in a paper or an assignment written, in whole or in part, by someone else. Students are responsible for plagiarism, intentional or not, if they copy material from books, magazines, or other sources without identifying and acknowledging those sources or if they paraphrase ideas from such sources without acknowledging them. Students responsible for, or assisting others in, either cheating or plagiarism on an assignment, quiz, or examination may receive a grade of F for the course involved and may be suspended or dismissed from the university.

   A faculty member has original jurisdiction over any instances of academic misconduct that occur in a course which the faculty member is teaching. The student shall be given the opportunity to resolve the matter in meetings with the faculty member and the department chair. If the facts of the incident are not disputed by the student, the faculty member may elect to resolve the matter at that level by levying a sanction no greater than an F for that course. The faculty member shall notify the student in writing whenever such action is taken, and the Office of Community Standards and Student Conduct shall receive a copy of the Academic Misconduct Incident Report indicating final disposition of the case, which will be placed in the student's judicial file. In all matters where the charge of academic misconduct is disputed by the student or if the faculty member feels a sanction greater than an F in the course is appropriate (such as repeated offenses or flagrant violations), the faculty member shall refer the matter to the Office of Community Standards and Student Conduct making use of the Academic Misconduct Incident Report. Additional sanctions greater than an F in a course can be levied only through the University Judicial System. With regards to finding the student either responsible or not responsible for his or her action, the ruling of the Judicial Hearing Board shall be binding. In cases where there is either a finding of responsibility or an admission of responsibility by the student, any recommendations by the hearing board regarding course grades are non-binding on the instructor, who retains sole responsibility for assigning grades, consistent with policies set forth in the syllabus.

2. **Accommodations for Students with Disabilities.** A student who believes that reasonable accommodations with respect to course work or other academic requirements may be appropriate in consideration of a disability must (1) provide the required verification of the disability to the Disabilities Resource Center, (2) meet with the Disabilities Resource Center to determine appropriate accommodations, and (3) inform the faculty in charge of the academic activity of the need for accommodation. Students are encouraged to inform the faculty of their requests for accommodations as early as possible in the semester, but must make the requests in a timely enough manner for accommodations to be appropriately considered and reviewed by the university. If contacted by the faculty member, the staff of the Disabilities Resource Center will provide advice about accommodations that may be indicated in the particular case. Students who make requests for reasonable accommodations are expected to follow the policies and procedures of the Disabilities Resource Center in this process, including but not limited to the Student Handbook. A wide range of services can be obtained by students with disabilities, including housing, transportation, adaptation of printed materials, and advocacy with faculty and staff. Students with disabilities who need such services or want more information should contact the Disabilities Resource Center (815-753-1303).