

**CHEM 455 BIOCHEMISTRY LABORATORY**  
**Spring Semester 2014**  
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**LAB SCHEDULE 2014**

| Week | Dates     | Lab Period 1<br>(Monday or Tuesday)                               | Lab Period 2<br>(Wednesday or Thursday)          |
|------|-----------|---|--|
| 1    | 1/13-1/17 | Check in and Introduction   | Pipette Calibration                              |
| 2    | 1/20-1/24 | No class  | DNA Isolation and Restriction Enzyme Digest      |
| 3    | 1/27-1/31 | Electrophoresis   | PCR  |
| 4    | 2/3-2/7   | PCR, Electrophoresis, and Buffer Preparation                      | Gel Filtration Chromatography                    |
| 5    | 2/10-2/14 | Ion Exchange Chromatography/Introduction                          | Ion Exchange Chromatography                      |
| 6    | 2/17-2/21 | Ion Exchange Chromatography                                       | Protein Concentration Determination and SDS-PAGE |
| 7    | 2/24-2/28 | $\beta$ -lactamase Activity Assay                                 | Bioinformatics/Primer Design/PCR Mutagenesis     |
| 8    | 3/3-3/7   | PCR Fragment Purification   | PCR Fragment Purification and Restriction Digest |
| 9    | 3/10-3/14 | Restriction Fragment Purification/Ligation/Agar Plate Preparation | DNA Transformation                               |
| 10   | 3/17-3/21 | Colony Screening (DNA Isolation and Restriction Digest)           | Verifying Mutations by Restriction Digest        |
| 11   | 3/24-3/28 | Spring Break  |  |
| 12   | 3/31-4/4  | Protein Purification and Dialysis                                 | Gel Filtration Chromatography                    |
| 13   | 4/7-4/11  | Ion Exchange Chromatography                                       | Ion Exchange Chromatography                      |
| 14   | 4/14-4/18 | BCA Analysis and SDS-PAGE   | Activity Assay                                   |
| 15   | 4/21-4/25 | Activity Assay  | Activity Assay                                   |
| 16   | 4/28-5/2  | Oral Presentation   |  |

**Final Lab Report Due in Lab Period 1, Week 16 (Mon. or Tues., 4/28-29).**