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1. Laboratory Schedule

<table>
<thead>
<tr>
<th>Lab</th>
<th>G-1</th>
<th>G-2</th>
<th>G-3</th>
<th>G-4</th>
<th>G-5</th>
<th>G-6</th>
<th>G-7</th>
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</thead>
<tbody>
<tr>
<td>Preparation and calibration of a GPC column</td>
<td>2-3</td>
<td>4-5</td>
<td>6-7</td>
<td>8-9</td>
<td>10-1</td>
<td>1</td>
<td>2-3</td>
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<tr>
<td>Preparation and characterization of an IE column</td>
<td>10-1</td>
<td>2-3</td>
<td>4-5</td>
<td>6-7</td>
<td>8-9</td>
<td>10-1</td>
<td>1</td>
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<tr>
<td>Preparation and running of IEF gels</td>
<td>8-9</td>
<td>10-1</td>
<td>2-3</td>
<td>4-5</td>
<td>6-7</td>
<td>8-9</td>
<td>10-1</td>
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<tr>
<td>Characterization of an ultra-Filtration unit</td>
<td>6-7</td>
<td>8-9</td>
<td>10-1</td>
<td>2-3</td>
<td>4-5</td>
<td>6-7</td>
<td>8-9</td>
</tr>
<tr>
<td>Partitioning of alcohol dehydrogenase</td>
<td>4-5</td>
<td>6-7</td>
<td>8-9</td>
<td>10-1</td>
<td>1</td>
<td>2-3</td>
<td>4-5</td>
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Projects (Last four weeks)

- Purification of alcohol dehydrogenase
- Purification of γ-crystallins
- Purification of a transgenic antibody

1. Grading

Your grade will be calculated as follows:
1. Laboratory reports (Five): 40%
2. Laboratory quizzes: 10%
3. Laboratory Participation: 20%
4. Final Report: 30%

The grade distribution will be:

From 90 to 100 points: A
From 75 to 89 points: B
From 60 to 74 points: C
< 60 D/F

Notes.
1. You are required to bring goggles (and use them!) to the Laboratory.
2. You are required to wear gloves during your experiments.
3. No food or drinks are allowed in the lab.
4. Your hair must be tied up.
5. No sandals are allowed.
6. None of the waste that you generate should go into the sink. Instead, the liquid waste must be placed in the waste container and the amount, concentration and date of generation must be written down on the tag.
7. You must read the Materials Safety Data Sheets of the chemicals that you will be using in any particular lab. You may be quizzed about this.
8. A full understanding of each of the laboratory practices is needed before the experiments are performed. You may be asked questions during your work and you should be able to answer them. If the instructor considers that your knowledge is insufficient you will be asked to leave the laboratory. You will not be allowed to recover that class in other time.
9. You are required to have a Laboratory notebook. Start a new page every day of work and date it. Keep track of your daily work in as much detail as you can (Include, for example, the lot number of the chemicals that you are using, masses, pHs, temperatures, etc.). Anybody should be able to follow your work by reading your Notebook. Include also printouts when appropriate (for example, absorbance readings from the spectrophotometer, chromatographs, pictures of gels, etc.) Your Lab notebook will be inspected daily. A deficient lab notebook will not allow you to stay in the laboratory.
10. Fifty percent of the grade in each report will reflect the quality of your writing. The remaining fifty-percent will reflect the technical quality of the report. Your notebook must accompany your report.
11. 20% of your grade will reflect your work during the hours that you spent in the laboratory. Active participation in ALL experiments is required. You will be required to work outside the established lab meeting times. Failure to do so will result in incomplete experiments. My T.A. and I will rank you at the end of the semester according to our observations.
12. Below average performance in this course will start an Academic Alert System warning. You will be asked to meet with your academic adviser to resolve the problem.
13. If you have a documented disability and anticipate needing accommodations in this course, you are strongly encouraged to meet with me early in the semester. You will need to request that the Disability Services staff send a letter to me verifying your disability and specifying the accommodation you will need before I can arrange your accommodation.
14. All cases of academic dishonesty will be treated according to the Student Academic Regulations handbook, which describes the student standard of conduct relative to the System's Collected Rules and Regulations section 200.010, and offers descriptions of academic dishonesty including cheating, plagiarism or sabotage.

Report Guidelines
The reports must be written in Times Roman 12 pts and in 1 1/2 spaces and be no longer than 8 pages. A report must include the following sections (specific instructions are given in the individual lab guides):

1. Introduction (1 page).
2. Materials and Methods. You must include all conditions used (pH, flow-rates, temperatures, concentrations, etc.) (1 page).
3. Results (Maximum: 5 pages including figures and tables).
4. Conclusions. (1/2 page)
5. References. (1/2 page)

Bibliography

Journal articles in the following publications:
1. Biotechnology and Bioengineering
2. Biotechnology Progress
3. Journal of Chromatography
4. Nature
5. Science
6. J. of Colloid and Interface Science
7. Proceedings of the National Academy of Science
8. J. of Biological Chemistry
9. Biomacromolecules
10. Biochemistry

Books

   TP248.25.S47 B55 2003
   TP248.25.S47 C47 1993
   RS189.5.C48 C53 1992
    QD79.C4 C493 v.2
    RS190.B55 F54 1998
   TP156.F5 F54 1987