

# Course Learning Objectives - CBE 320

## Chemical and Biomolecular Engineering Laboratory

### (3)

At the conclusion of this course, the student should be able to plan, conduct, and present written and oral reports on assigned chemical engineering unit operations laboratory projects based on the principles of thermodynamics, fluid flow, and heat transfer. Specifically, each student should be able to:

1. State clear and concise objectives for each laboratory project.
2. Organize a team and work as a team member to conduct each laboratory project.
3. Develop, present, and defend a plan for conducting each laboratory project.
4. Document the project plan in a laboratory notebook as specified in the "Pre-lab Check Sheet."
5. Conduct each laboratory project in accordance with its plan.
6. Demonstrate familiarity with the "Laboratory Safety Rules."
7. Use appropriate electronic tools to obtain needed background information and to communicate with team members, team leader, and other technical personnel for assigned laboratory projects.
8. Maintain a formal laboratory notebook for the assigned projects following the "Laboratory Notebook Guidelines."
9. Use appropriate computer tools to analyze laboratory data, and present the technical information in appropriate flow sheets, tables, and figures.
10. State clear and concise results for each laboratory project.
11. Interpret the results of a laboratory project in terms of theoretical models and/or literature correlations.
12. Present formal oral reports on assigned laboratory projects.
13. Function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
14. Develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.