

Course Learning Objectives - CBE 480

Equipment Design and Economic Methods (3)

At the conclusion of this course, the student should be able to:

1. Synthesize an appropriate flowsheet to meet a process objective, using a conceptual design strategy.
2. Calculate the material and energy balances for a given process flowsheet.
3. Estimate the capital investment for a conceptual process design.
4. Estimate the operating cost for a conceptual process design.
5. Evaluate the impact of a conceptual process design on safety, health and environment.
6. Determine the sensitivity of the process design to selected operating and/or market conditions. Optimize the design of a conceptual process.
7. Evaluate the profitability of a given process design, using the principles of engineering economics and various common measures of profitability.
8. Select an appropriate process design based on comparison of alternatives.