

416c An Effective/Efficient Way to Teach Senior Lab - Distillation Column

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A conventional approach to teach distillation experiment would be to run the experiments once for the students, give them specific tasks and ask them to perform a given task. Though this is the first time we taught this course, we felt that graduating seniors can do much more than doing a routine task. We decided to test a distillation column that was not used for the past seven years. We ran the column to make sure it works.

Three groups of five members were formed. Instead of meeting the entire class every week, we met with individual groups every week. We gave the tour of the lab to the groups. We made the course open ended. That is, the students have to come up with a plan for the lab, conduct experiments, make analysis and present results. All the three groups ran the column at different operating conditions and used various concepts they learned in the ChE curriculum to plan the experiments and analyze the data. Students enjoyed this lab and they were excited to see flooding.

Merits and pitfalls with such an approach will also be discussed.