

# COLLEGE OF CHEMISTRY COURSE GUIDE (../INDEX.HTML)

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## **CBE 40 - INTRODUCTION TO CHEMICAL ENGINEERING DESIGN (2 UNITS)**

### **COURSE OVERVIEW**

#### **SUMMARY**

ChemE 40 is the first chemical engineering class offered at the undergraduate level. Students will be introduced to the field with fundamental topics including mass and energy balances, economics, and phases. The class emphasizes collaboration and attendance to discussions and lectures. Homeworks are assigned weekly, and there is a final design project at the end of the course. No prior knowledge required.

#### **PREREQUISITES**

N/A

#### **TOPICS COVERED**

- Design Strategies and Process Flow Diagrams
- Nonreactive and Reactive Material Balances
- Process Economics
- Energy Balances
- Phase Diagrams
- Flash Drums

# WORKLOAD

## COURSEWORK

- 1 midterm
- 1 final exam
- 1 final project (write-up+presentation)
- 11 homeworks
- Pop quizzes during lecture
- ~5 Extra Credit Assignments

## TIME COMMITMENT

1 hour of lecture per week (including 1 hour for lab lecture), 1.5 hours of discussion per week (MANDATORY).

## CHOOSING THE COURSE

### WHEN TO TAKE

This class is required for chemical engineering majors. It is offered both fall and spring semesters, with the fall semester being dominantly transfer students. This class should be taken during the first year of the major.

### WHAT NEXT?

- CBE 140: Introduction to Chemical Processes ([cbe140.html](http://cbe140.html))

## ADDITIONAL COMMENTS AND TIPS

Although the class is two units, the workload is definitely more, so be prepared to put in around 3-4 units of work. Otherwise, ChemE 40 is a good introduction to the field, but keep in mind that this class is easier than the other chemical engineering courses you will take, especially if you are planning to switch majors.

The homeworks are definitely a lot more difficult than what is presented in lecture and discussion. I found it helpful to follow up on the readings (which wasn't hard since there wasn't a lot) and going to office hours. This course has an abundant of GSIs (usually around 15), so take advantage of all the help you can get for the problem sets. The midterm is generally harder than the final, but the midterm is not weighted much, usually even less than homeworks.

Discussions are mandatory, and lectures are mandatory in the fact that there will be occasional pop quizzes. There is a lot of opportunity for extra credit in this class, so take advantage of this.

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Last edited: Fall 2018

## **COLLEGE OF CHEMISTRY PEER SERVICES**

Made by Angela Lee, c/o 2019



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