CHE 421 Chemical Plant Economics

Instructor: K.M. Wagialla
Pre Req(s): CHE 321
Total credits: 3
Lecture Cr: 3
Lab Cr: 0
Recitation Cr: 0
Co Req(s):

Contribution to professional component:
Math and Basic science Cr: 1
Engineering Cr: 2
General Education Cr: 1

Catalog Data:

Textbook:

Topics covered
1. Introduction (2 classes).
2. General design considerations (2 classes).
3. Process design development. (3 classes).
4. Software use in process design. (2 classes).
5. Capital cost and operating cost estimation. (6 classes).
6. Profitability analysis. (4 classes).
7. Alternative investments and replacements. (3 classes).
8. Optimum design and design strategy. (6 classes).

Objectives

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a. Ability to apply knowledge of math, engineering, and science.
b. Ability to design and construct experiments.
c. Ability to design a system, component, or process.
d. Ability to function on multi-disciplinary teams.
e. Ability to identify, formulate, and solve engineering problems.
f. Understanding of professional and ethical responsibility.
g. Ability to communicate effectively.
h. …broad education … to understand the impact of eng. solutions in a global and societal context.
i. Recognition of the need for and ability to engage in life-long learning.
j. Knowledge of contemporary issues.
k. Ability to use techniques, skills, and modern engineering tools necessary for engineering practice.
L. Quickly contribute in their focus area.
M. Team contributors.

Key: 3: strong 2: moderate 1: weak