

CE 329 Fall 2015
Class 15 Worksheet

Read through the problem statement and each time you encounter a quantity, assign it to the appropriate variable.

Write the mole balance design equation for the reactor used in the experiments. This equation will be used to model each of the experiments

Substitute the rate expression to be tested into the design equation

Integrate the mole balance

- Identify the dependent and independent variables:
- Identify any other variable quantities appearing in the mole balance:
- Express the other variables in terms of the dependent variable and the independent variable

- Substitute for the other variables in the design equation

A First Course on Kinetics and Reaction Engineering

- Separate the variables

- Integrate the design equation

Linearize the integrated design equation

Calculate the values of y and x for each experimental data point

Fit the linear model to the corresponding x - y data

Decide if the fit is acceptable and report the values and uncertainties for the kinetic parameters