Lesson 03

EVE 405 Lesson 03: Mass Balances & Flow Models

Instructional Objectives

1. Be able to perform flow and material balances on batch, completely-mixed, and plug flow reactor systems.
2. Derive detention time (θ) and effluent concentration equations for batch, completely-mixed, and plug flow reactors that have either a production or removal reaction occurring within.
3. Derive detention time (θ) and effluent concentration equations for batch, completely-mixed, and plug flow reactors that have a zero, first, or second order reaction occurring within.

Study Assignment

1. Read pages 47-63 in the course text.

Homework

1. Work problems 3.4 and 3.7