

Course Title: Integrated Process Synthesis

Course ID:	Course Type:
CH756	Instructor-led (classroom) Course
http://www.aiche.org/ch756	

Course Schedule

Day One

8:00 – 8:30	Registration
8:30 – 10:00	Philosophy and overview of integrated process synthesis
10:00 – 10:15	Morning Break
10:15 – Noon	Mass balance: Application to process synthesis and the process mass balance target
Noon – 1:00	Lunch Break
1:00 – 3:00	Energy balance: Application to a process and the process energy balance target
3:00 – 3:15	Afternoon Break
3:15 – 5:00	Entropy: Application of entropy to a process and entropy target

Day Two

8:00 – 10:00	Graphical representation of mass, energy and Gibbs energy constraints
10:00 – 10:15	Morning Break
10:15 – 11:00	Supplying work to a process: decomposing processes
11:00 - Noon	Adding additional work via compression
Noon – 1:00	Lunch Break
1:00 – 3:00	Separation: Defining the work of separation and determining the magnitude of the work of separation
3:00 – 3:15	Afternoon Break
3:15 – 5:00	Distillation as a heat engine

Day Three

8:30 – 10:00	Using experimental results in the early design stages to aid in synthesizing a flowsheet
10:00 – 10:15	Morning Break
10:15 – Noon	Mass, energy and work flows based on experimental results/existing flowsheet
Noon – 1:00	Lunch Break
1:00 – 3:00	Analysis of biological processes in terms of mass, energy and entropy
3:00 – 3:15	Afternoon Break
3:15 – 5:00	Calculating thermodynamic parameters of biological processes from experimental results, which can be useful for designing biological systems