

Course Title: AIChE's Chemical PE Exam Review Course

Course ID:	Course Type:
ELA260	eLearning

Course Outline

- Mass/Energy Balances
 - mass balances without reactions
 - mass balances with reactions
 - energy balances without reactions
 - energy balances with reactions
- Thermodynamics
 - work and energy
 - ideal fluids
 - real fluids
 - phase equilibria
- Fluids
 - flow behavior
 - mechanical energy
 - pumps and compressors
 - flow networks and fluid measurements
- Heat Transfer
 - without phase change
 - with phase change
 - equipment design
 - analysis of performance
- Mass transfer
 - distillation
 - absorption-stripping
 - liquid extraction
 - miscellaneous processes

- Kinetics
 - general definitions
 - chemical equilibrium, complex rate expressions
 - single reactors
 - complex reactors, ionic equilibrium
- Plant Design and Operation
 - economics
 - design
 - operation, safety and environment