Course Title: AIChE’s Chemical Process Economics Evaluations

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<td>eLearning Course</td>
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Course Outline

- Lesson 1: Introduction
  - Working with an evaluation client
  - Looking for value opportunities
  - Levels of evaluation
  - Determination of the value of 1% selectivity to global ethylene oxide producers

- Lesson 2: Process Design
  - Heat and Material Balances
  - Unit Operations
  - Flowsheet Considerations
  - Shortcut Design for your Toolbox
  - Lesson 2 Worked Exercise

- Lesson 3: Costs of Production and Pricing
  - Variable Costs
  - Fixed Costs
  - Raw Material and Product Pricing
  - Utility Pricing
  - Glossary
  - Lesson 3 Worked Exercise

- Lesson 4: Capital Cost Estimating
  - Scope of ISBL and OSBL
  - Estimate Classification
  - Sources of Estimates
  - Equipment Specifications
  - Working with Estimates
  - Lesson 4 Worked Exercise

- Lesson 5: Cash Flow Analysis
  - Time value of money
  - Project Considerations
- Depreciation and Taxes
- Working Capital
- Cash Flows and Metrics
- Non-Standard Periods
- Lesson 5 Worked Exercise

- Lesson 6: Putting it All Together
  - Sensitivity Analysis
  - Dashboards
  - Break Even Plots
  - Tornado Diagrams
  - Evaluations Course Summary

- Final Exam