

Course Title: AIChE's Cash Flow Principles for Chemical Engineers

Course ID:	Course Type:
ELA147	eLearning Course
http://www.aiche.org/ela147	

Course Outline

Lecture 1

- Introduction and Goal of the course
- What actually Is "Cash Flow"
- Importance of Cash Flow
- Financial Statements
 - Three major reporting statements:
 - Balance Sheet – assets, liabilities and shareholders' equity
 - Income Statement (profit & loss) - net income, EPS
 - Cash Flow Statement – sources and uses of cash; change in cash balance
- Project Cash Flow
- Time Value of Money
 - Compounding
 - Discounting
 - Timing of the cash flow
 - Type of compounding / discounting
- Modeling issues
 - Cash Flow Timing
 - Discrete and Continuous Compounding/Discounting
 - Discrete Annual Discount Factors
 - Continuous Discount Factors
 - Class Exercise
- Cash Flow Modelling
 - Present Value
 - Cost of Capital
 - "Weighted average cost of capital" or WACC

Lecture 2

- Introduction and Re-cap of Lecture 1
- Net Present Value

- Definition
 - Examples
- Internal Rate of Return
 - NPV versus Discount Rate
- Modeling in Excel
 - IRR, MIRR, XIRR
- Profitability Index (PI)
- Payback
- Using Discounted Cash Flows to Value Companies
- Conclusions and Wrap-up