

## Spreadsheet Problem-Solving for Chemical Engineers

This two-day course provides a comprehensive hands-on experience in solving numerical problems often encountered by chemical engineers using Microsoft Excel. Scenarios include material and energy balances, fluid flow, heat transfer, separations, chemical reactions, and process flowsheets. Methods included are equation-solving, data analysis, optimization and process economics.

### Basic Spreadsheet Skills

- Configuring Excel for engineering calculations
- Efficient spreadsheet manipulations
- Formulas, cell addressing and range names
- Creating engineering graphs

### Process Calculations

- Dealing with engineering formulas and units
- Debugging spreadsheet calculations
- Flowsheet calculations with recycle
- Targeting calculations
- Case studies

### Dealing the Data

- Table look-up and interpolation
  - Incorporation table look-up in engineering calculations