

# 2019 Workshop Series

Our expert-led, hands-on instruction helps you get the most value from your CHEMCAD software.



## CHEMCAD 7

Have you made the switch yet?  
All workshops are taught using  
CHEMCAD version 7.

Come learn with the latest version  
and see what you've been missing!

## Workshop Schedule

Tuesday & Wednesday:  
8:00 AM - 5:00 PM

Thursday: 7:30 AM - Noon  
Lunch: Noon - 1:00 PM

Course includes workshop manual,  
notepads, lunches,  
and refreshments.

For more details,  
please call:

**1.800.CHEMCAD**

***Class size is limited,  
so register early!***

If the listed workshop dates are  
not convenient for you, ask your  
sales representative about  
additional dates. We can also  
customize an in-house training  
course to fit your organization's  
specific needs.

## Basic CHEMCAD Workshops

- February 19 - 21 • Houston, TX
- May 21 - 23 • Cleveland, OH
- June 4 - 6 • Jacksonville, FL
- August 20 - 22 • Salt Lake City, UT
- October 15 - 17 • Houston, TX

## Advanced CHEMCAD Workshops

- March 5 - 7 • St. Louis, MO
- September 17 - 19 • Houston, TX

## CHEMCAD Productivity Workshop CHEMCAD Dynamics Workshop

Contact us for dates • [sales@chemstations.com](mailto:sales@chemstations.com)



Chemstations™

# Workshop Descriptions

Choose the workshop that best fits your interests and level of CHEMCAD experience. Most topics are covered using real-world examples.

## Basic

- Overview of CHEMCAD functions
- Overview and navigation of the physical property database
- Adding a new component to the database
- Overview of thermodynamic options
- Building a flowsheet for design purposes
- Modeling an existing process
- Quantitative and qualitative use of simulation
- Using simulation for day-to-day tasks
- Using plant data in process flowsheets
- CHEMCAD for unsteady-state, transient, and static problems
- Simulation as an extension of your engineering thought process
- Modeling plant utilities (steam, process water, etc.)
- Coverage of recycle loops, distillation, reactors, heat exchangers, controllers, CHEMCAD plots and reports, solid components, electrolytes, and component binary interaction parameters (BIPs)

## Advanced

- Modeling entire existing processes
- Avoiding common pitfalls in simulation
- Quantitative and qualitative use of simulation
- Manipulating thermodynamics to fit plant data
- Dealing with “unruly” plant data
- Using plant data in process flowsheets
- Simulation as an extension of your engineering thought process
- Using a laboratory to verify and investigate thermodynamics
- Coverage of:
  - Recycle loops
  - Distillation (continuous and batch)
  - Advanced heat exchanger topics
  - Advanced controller topics
  - Finding and breaking azeotropes
  - Batch and unsteady-state processes
  - Batch-to-continuous processes
  - Advanced electrolyte topics

## CHEMCAD Productivity

- Customization of CHEMCAD using Microsoft Excel® and Visual Basic for Applications® (VBA)
- Using a worksheet as a front end for CHEMCAD
  - Customizing UnitOps and calculations
  - Simple data connection to an external workbook
- Examination of real equipment selection based on process performance
- Sizing of pipes, orifices, control valves, columns (packed and tray)
- Mass transfer calculation for sized packed columns
- Heat exchanger sizing using CC-THERM
- Two-phase vessel sizing
- Nodes to model real hydraulics
- Special calculation methods to help simulations converge:
  - Stream reference modules
  - Controllers (feed-forward and feedback)
  - UnitOp sequence groups

## Dynamics

- Overview of dynamic models in CC-DYNAMICS
- Batch processes
  - Basics of modeling batch processes
  - Building batch process flowsheets
  - Batch, semi-batch, and continuous vessels
  - Specifying a vessel and its associated equipment
  - Using dynamic controllers
  - Viewing, plotting, and using results
- Batch reactors
  - Regressing kinetic data for reactions
  - Batch and semi-batch/continuous tank reactors
  - Using a laboratory to verify and investigate kinetics
  - Using calorimeter data with dynamics
  - Modeling batch reactors with distillation columns
- Dynamic distillation
  - Basics of building dynamic distillation models
  - Moving from steady state to dynamics
  - Feed/process changes or disturbances
  - Start-up and shutdown of a column
  - Using PID controllers with distillation units

