

# 2018 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

March 6 - 8 • Houston, TX

May 15 - 17 • Cleveland, OH

July 18 - 20 • Orlando, FL

September 25 - 27 • Pittsburgh, PA

November 6 - 8 • Houston, TX

## Advanced CHEMCAD Workshops

April 10 - 12 • Chicago, IL

October 16 - 18 • 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

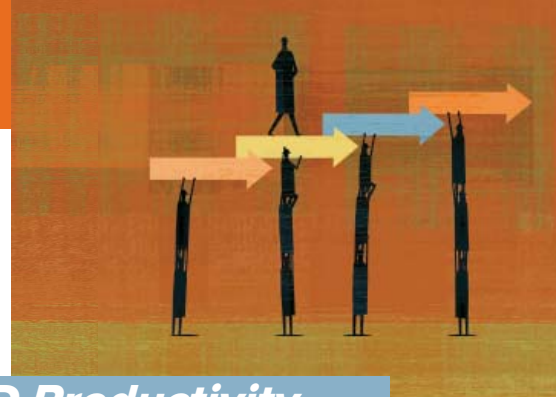
- Modeling entire existing processes
- Avoiding common pitfalls in simulation
- Quantitative and qualitative use of simulation
- Manipulating thermodynamics to fit plant data
- Dealing with “unruly” plant data
- Using plant data in process flowsheets
- Simulation as an extension of your engineering thought 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- and three-phase vessel sizing
- Nodes to model real hydraulics
- Special calculation methods to help simulations converge:
  - Nodes
  - Stream reference modules
  - Loop UnitOp
  - Controllers (feed-forward and feedback)
  - UnitOp sequence groups
- Use of the META UnitOp to create simulation subroutines

## 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



# Registration

To register for any 2018 workshop, return this form to **Chemstations, Inc., 3100 Wilcrest Drive, Suite 300, Houston, TX 77042**, or fax to **713-978-7727**. If you prefer, you can fill in this form using Acrobat Reader, save the file, and send it as an e-mail attachment to **whitneyg@chemstations.com**.

Name \_\_\_\_\_ Title \_\_\_\_\_  
(as it should appear on completion certificate—**one participant per form**, please)

Company \_\_\_\_\_ Telephone \_\_\_\_\_

Mailing address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ ZIP \_\_\_\_\_

E-mail address \_\_\_\_\_

## Course Selection

**Basic:**  Workshop Attending

- March 6 - 8 • Houston, TX
- May 15 - 17 • Cleveland, OH
- July 18 - 20 • Orlando, FL
- September 25 - 27 • Pittsburgh, PA
- November 6 - 8 • Houston, TX

Cost per participant  
for any workshop:  
\$1,750

**Advanced:**  Workshop Attending

- April 10 - 12 • Chicago, IL
- October 16 - 18 • Houston, TX

**Productivity:**  Interested—please contact me

- Preferred month: \_\_\_\_\_

**Dynamics:**  Interested—please contact me

- Preferred month: \_\_\_\_\_

Payment Methods:

- Check (payable to Chemstations, Inc.)
- Purchase Order Number: \_\_\_\_\_
- VISA, MasterCard, or American Express

Name as it appears on credit card: \_\_\_\_\_



Account Number: \_\_\_\_\_ Exp. date: \_\_\_\_\_ Security code: \_\_\_\_\_  
(3 digits for MC/Visa, 4 digits for American Express)

Billing address, if different from above: \_\_\_\_\_

**Registration/Cancellations:** Written cancellations received two weeks prior to the course date will be subject to an administrative charge of \$75. No refunds will be made for cancellations after this date or for nonattendance. Substitutions may be made at any time. Chemstations reserves the right to cancel/reschedule any workshop if minimum enrollment is not reached, in which case all fees will be refunded.