

## CHEMCAD Basics Seminar Agenda

The CHEMCAD Basics seminar aims teaching CHEMCAD beginners, how to start implementing simulations and the fundamental settings of the most common unit operations. The participants benefit from the many years of experience of the instructors, receiving helpful tips and tricks, which are useful in the daily handling of the software.

At the end of the seminar, the participants will be able to use the functionalities of CHEMCAD in order to build simulations and interpret the results.

### CHEMCAD Basics Seminar 1. Day

<b>9.00 - 10.45</b>	<b>Welcome and Introduction</b> <ul style="list-style-type: none"> <li>- Component databank</li> <li>- Thermodynamic models</li> <li>- Basic settings in CHEMCAD</li> <li>- Plotting TPxy diagrams</li> </ul> <b>Flash Calculation</b> <ul style="list-style-type: none"> <li>- Mixing and separating streams</li> </ul>
<b>10.45 – 11.00</b>	Break
<b>11.00 – 12.30</b>	<b>Creating the First Simulation – Linde Process</b> <ul style="list-style-type: none"> <li>- Examining results, convergence</li> <li>- Presenting results, MS-Excel report</li> </ul> <b>User Components and Data Regression</b> <ul style="list-style-type: none"> <li>- Entering user components</li> <li>- Pure component data regression</li> <li>- BIP regression</li> </ul>
<b>12.30 – 13.30</b>	Break
<b>13.30 – 15.00</b>	<b>Distillation</b> <ul style="list-style-type: none"> <li>- Sensitivity analysis</li> <li>- Column profiles</li> </ul> <b>Absorption</b> <ul style="list-style-type: none"> <li>- Gas scrubbing</li> </ul>
<b>15.00 – 15.15</b>	Break
<b>15.15 - 16.30</b>	<b>Rectification Column</b> <ul style="list-style-type: none"> <li>- Hydraulic design</li> <li>- Sherwood – Eckert, Billet – Schultes, Bravo – Fair</li> <li>- Costing</li> </ul>
<b>16.30 – 17.00</b>	Summary, Discussion, Questions

## CHEMCAD Basics Seminar 2. Day

<b>9.00 - 10.30</b>	<b>Heat Exchangers</b> <ul style="list-style-type: none"> <li>- Heat pump</li> <li>- Heat Curve, T-Q-Diagram</li> </ul> <b>Reactors in comparison</b> <ul style="list-style-type: none"> <li>- Gibbs</li> <li>- Equilibrium</li> <li>- Kinetic</li> <li>- Stoichiometric</li> </ul>
<b>10.30 - 10.45</b>	Break
<b>10.45 - 12.15</b>	<b>Pipe Networks</b> <ul style="list-style-type: none"> <li>- Pressure drop calculation</li> <li>- Pipe diameter</li> <li>- Pump and compressor power</li> <li>- Nodes, valves</li> </ul>
<b>12.15 - 13.15</b>	Break
<b>13.15 - 14.45</b>	<b>Dynamic simulation</b> <ul style="list-style-type: none"> <li>- Setting up a dynamic simulation</li> <li>- Tank level</li> <li>- Controller, valves</li> </ul>
<b>14.45 - 15.00</b>	Break
<b>15.00 - 17.00</b>	<b>CHEMCAD Extensions and Interfaces</b> <ul style="list-style-type: none"> <li>- MS-EXCEL &lt;-&gt; CHEMCAD connection through DataMap</li> <li>- Control CHEMCAD through VB Client</li> <li>- VBA Custom UnitOp</li> </ul>
<b>To conclude:</b>	Summary, Discussion, Questions