

Training



A VLXE course programme:

Implementing Thermodynamic Routines

(Level 3 course)

When/where:

Spring 2016 in Houston, Texas

VLXE Implementing thermodynamic routines Course:

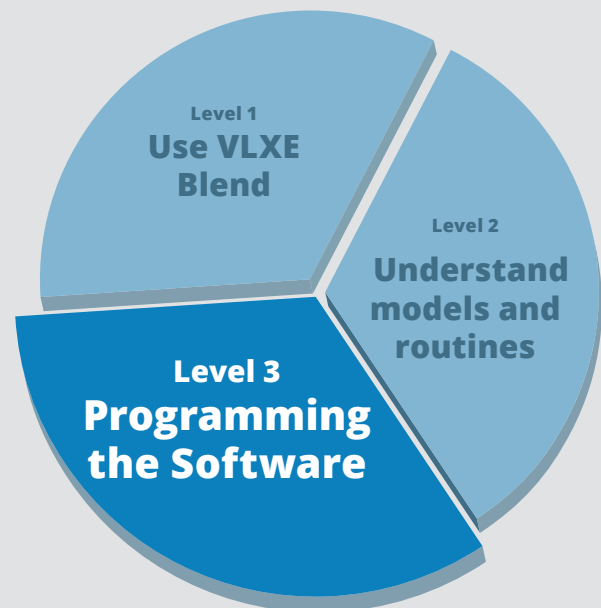
Background

VLXE offers courses on three levels:

Level 1: Use of VLXE Blend

Level 2: (Advanced thermodynamic course)
Deep understanding of the models, equations and routines used in the above software package(s).

Level 3: How to implement thermodynamic models and routines (programming course)



The objective of this Level 3 course is to provide attendees with an in-depth knowledge of how to program thermodynamic routines. The programming of models and calculation routines will be covered. The attendees will obtain the skills needed to implement robust routines on their own.

Who should attend?

The course should be attended by:

- Users of VLXE Blend, who would like to use the VLXE API or implement their own routines.
- Engineers who code thermodynamic models and routines.
- Academic researchers who need to code thermodynamic models.
- Users of other process simulation packages looking to gain an expert understanding of thermodynamic routines.

Course content

The course will combine lectures with hands-on exercises using VLXE API. The coding exercises will all be done using C#.

Elements of the syllabus include:

Lecture Material:

- Models and their parameters (MSL, PC-SAFT and coPC-SAFT).
- Effect of heavy molecules.
- Implementation of models.
- Implementation of temperature/pressure flash including stability analysis.
- Implement cloud point routine.
- Implement a phase envelope routine.
- Implementation of damping.
- Newton method.

C# based exercises

- Obtain numerical derivatives of PC-SAFT. Compare to analytical.
- Examine effect of molar mass on derivatives.
- Implement a volume solver for PC-SAFT.
- Implement stability analysis routine.
- Implement 2-phase flash calculations.
- Implement a cloud point routine.
- Implement a phase envelope routine.

The standard course requires 3 days.
Duration can be adjusted to meet customer needs.

This course will be given by Dr. Torben Laursen, owner of VLXE. Dr. Laursen has more than 12 years of experience writing robust thermodynamics software applicable to highly complex systems. His clients include Afton Chemical, Chevron, ConocoPhillips, Dow Chemicals, Exxon-Mobil, Merck, NOVA Chemicals, Sabic, Sasol, Statoil, University of Dortmund, Rice University and others.



Delivery

Spring 2016 in Houston, Texas.

The course fee is 4,000 Euro including lunch and course notes..
Please contact tl@vlxe.com regarding method of payment and costs for
custom courses available at your facility.

Registration & Cancellation Policy

Registration including payment must be completed two weeks before course start. Full refund of course costs will be given for cancellation two weeks prior to the course start date.

Contact information:

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