



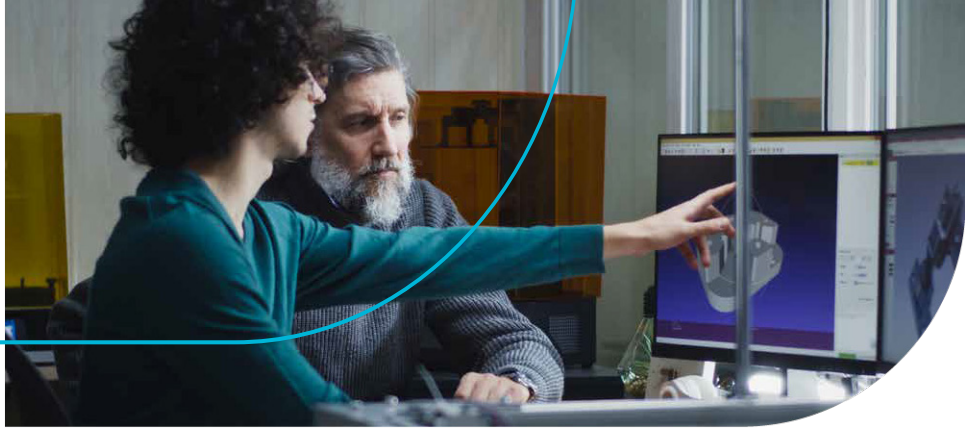
CLAYTEX

A TECHNIA COMPANY

Dymola, Modelica, VeSyMA and FMI

Online training brochure

www.claytex.com



About our training

Claytex provides a comprehensive suite of online training courses designed to develop and enhance your skills in Dymola, Modelica, FMI, and specialist Claytex libraries. Each course blends self-paced learning with expert guidance, ensuring both accessibility and depth of understanding.

Our structured programmes combine:

- High-quality video modules with demonstrations and narrated walkthroughs
- Downloadable, password-protected PDF materials
- Live interaction with Claytex simulation specialists for support and clarification
- Flexible access - enabling you to learn at your own pace

With over 20 years of experience in model-based design, simulation, and library development, Claytex delivers practical, real-world training trusted by engineers worldwide.

Training courses

- Dymola / Modelica foundation course
- Dymola advanced training
- Thermo-fluid training
- Fluid power library training
- Vehicle dynamics training
- Model debugging & performance analysis
- Model optimisation with Dymola
- Dymola model troubleshooting
- Custom workshops
- Interfacing with Modelica
- FMI training courses

"The Dymola training was delivered by a very knowledgeable and approachable trainer who took the time to ensure all participants were comfortable with the material content and had a chance to practice and understand the exercises to become familiar with the package."

Engineer, Automotive OEM

Dymola / Modelica foundation course

A complete introduction to modelling and simulation with Dymola and Modelica. Through guided examples, you will learn how to construct, edit, simulate and analyse models, building a strong foundation in both the tool and the language.

This course will also teach you a structured and systematic approach to modelling with Dymola and Modelica that you will benefit from in every model you create.

Core topics

- Dymola interface and workflow
- Modelica language fundamentals
- Building custom models (graphical & text layer)
- Library structuring and best practices
- Initialisation approaches
- Simulation and analysis techniques
- Model Inheritance

Additional modules

- Scripting
- Hierarchical and expandable connectors
- Planar loop theory
- Event handling
- Templates and reusable architectures
- Plug-and-play modelling
- Replaceable components

Duration: 12-14 hours

Cost: £1080 per attendee

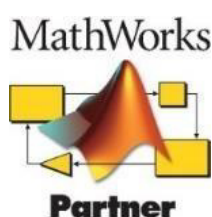


€1250 per attendee



\$1462 per attendee

Prerequisites: PC with Dymola and a supported compiler



Dymola advanced training

Designed for experienced users seeking deeper technical capability. Learn advanced modelling concepts and techniques for creating efficient, scalable, and robust Modelica models.



Modules:

- Annotations
- Friction modelling
- Linearisation
- Records
- State selection
- Synchronous control
- Component arrays
- Class parameterisation

Duration: 6-8 hours

Cost: £600 per attendee
(choose up to 6 modules)

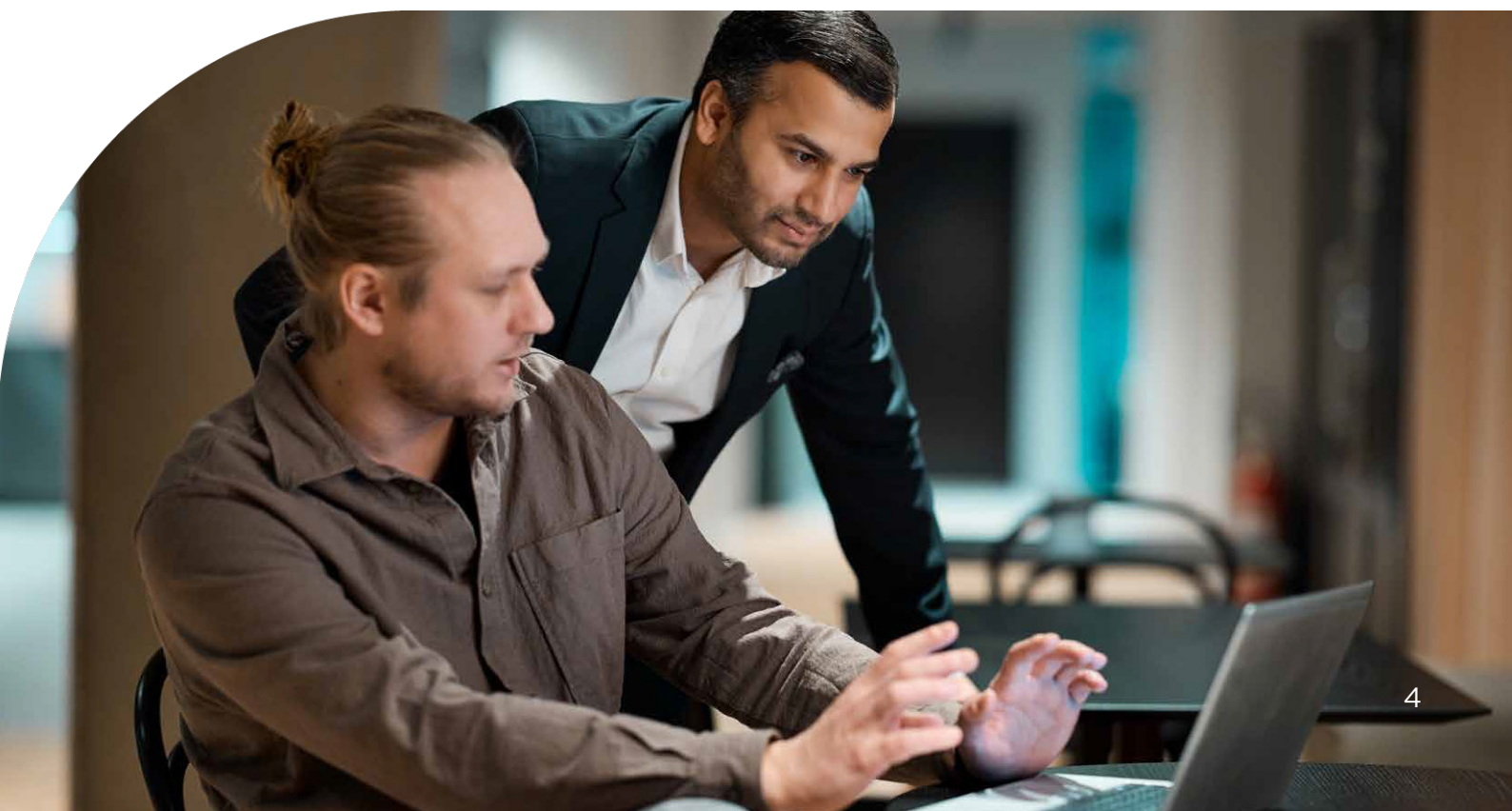


€695 per attendee



\$812 per attendee

Prerequisites: Basic Dymola & Modelica knowledge





Thermo-fluid training

Develop the skills required to model and simulate thermo fluid systems using the Modelica.Fluid library.

Topics covered:

- Modelling philosophy for fluid systems
- Efficient modelling for high performance
- Staggered grid concepts
- Stream variables
- Custom valve modelling
- Positive displacement pump modelling
- Modelling two-phase systems (e.g. boilers) and control strategies
- Preparing models for external control

Duration: 8 hours

Cost: £580 per attendee

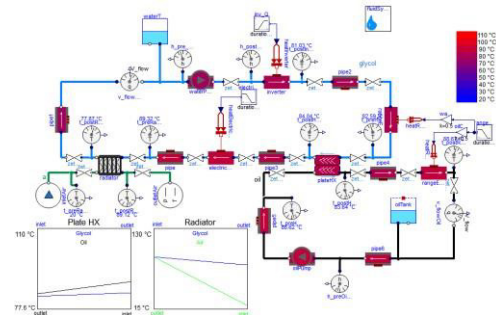


€670 per attendee



\$785 per attendee

Prerequisites: Basic Dymola & Modelica knowledge



"I felt the training offered by Claytex was extremely beneficial to me as a modelling engineer. I have already seen the impact of the training through increased speed in model simulations. Additionally, it has helped improve a particular simulation that was quite difficult to simulate at (near zero flow). Overall, I was very pleased with the training I received. I even recommended future use of Claytex services for new employee training.

*Model Based Development Engineer
- Air-conditioning and refrigeration solutions*

Fluid power library training

Learn to leverage the Claytex Fluid Power library to build reliable and efficient hydraulic and pneumatic systems.

Topics include:

- Modelling philosophy of the Fluid Power library
- Circuits with entrained air
- Double-acting cylinder modelling
- Defining custom fluids
- Troubleshooting
- Performance-oriented modelling techniques

Duration: 8 hours

Cost: £580 per attendee

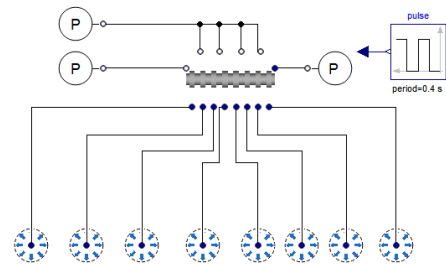


€670 per attendee



\$785 per attendee

Prerequisites: Basic Dymola & Modelica knowledge



Vehicle dynamics training

An ideal course for users working with Multibody dynamics, VeSyMA, Suspensions, and optional Motorsports applications.

What you will learn:

- Multibody modelling fundamentals
- Use of experiments and templates
- Working with VeSyMA and associated libraries
- Common modelling pitfalls and solutions

Duration: 12-14 hours

Cost: £1080 per attendee



€1250 per attendee



\$1462 per attendee

Prerequisites: Basic Dymola and Modelica knowledge



Model debugging & performance analysis

Gain a structured approach to identifying and resolving model inefficiencies. This course also offers optional coverage of advanced flags and solver settings, including Inline Integration, as well as techniques for preparing models for real-time use.

Key topics

- Performance bottleneck identification
- Improving model robustness
- Solver options and advanced flags
- Inline Integration & real-time model preparation

Duration: 8 hours

Cost: £580 per attendee



€670 per attendee



\$785 per attendee

Prerequisites: Active Dymola user

Model optimisation with Dymola

Learn how to perform optimisation directly inside Dymola using the Optimisation library.

Key topics

- Single and multi-case optimisation
- Single and multi-criteria optimisation
- Control and geometric parameter optimisation

Cost: £550 per attendee



€630 per attendee



\$745 per attendee

Prerequisites: Active Dymola user



Dymola model troubleshooting

A personalised, interactive troubleshooting session tailored to your needs.

Session features:

- One-to-one guidance
- User-defined topics
- Optional model review
- Option to record the session

Custom workshops

Ideal for teams requiring deep dives into specific applications, models, or workflows.

Highlights:

- Fully customised content
- Work directly with your models
- Online or optional face-to-face delivery

Duration: 1 hour

Cost: £138 per attendee



€160 per attendee



\$187 per attendee

Prerequisites: Basic Dymola & Modelica knowledge

Duration: 8 hours

Cost: £1000 (any number of attendees)



€1160 (any number of attendees)



\$1354 (any number of attendees)

Prerequisites: Active Dymola user

Interfacing with Modelica

Learn how to integrate external C code and Python workflows with Dymola models.

Covered topics

- External C-code integration
- C-function calls from Dymola
- Mapping variables & records
- Creating Modelica external objects
- Debugging techniques (dymosim.exe)
- Python-Dymola interface
- Simulation automation & post-processing



“Arrangement, preparation and delivery of the workshop was done professionally and at high standards. The debugging session brought insights into the tool which is definitely beneficial for the team and follow up emails and discussions were really helpful to solve some urgent issues.

The training also unveiled some useful features and interesting tips not fully reflected in the documentation or not easily elsewhere.”

Engineer – Research Institute

FMI training courses

Introduction to FMI

- FMI Model Exchange & Co-Simulation
- Exporting and importing FMUs
- Solver and FMU configuration
- Claytex FMU Starter Kit

Interfacing with FMPy

- FMPy installation & setup
- Python co-simulation and automation
- Parameter initialisation & result extraction

FMI debugging

- Compilation workflow
- Debugging FMUs and C/C++ functions
- Structure of dsmodel.c
- Debugging FMUs via Dymola, and FMPy

All courses: 2 hours

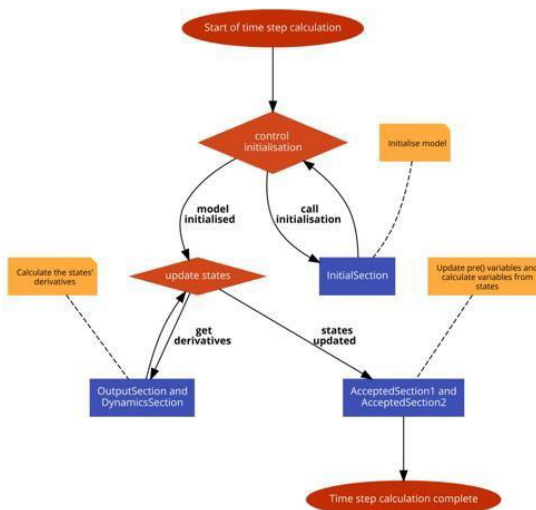
Cost: £265 per attendee

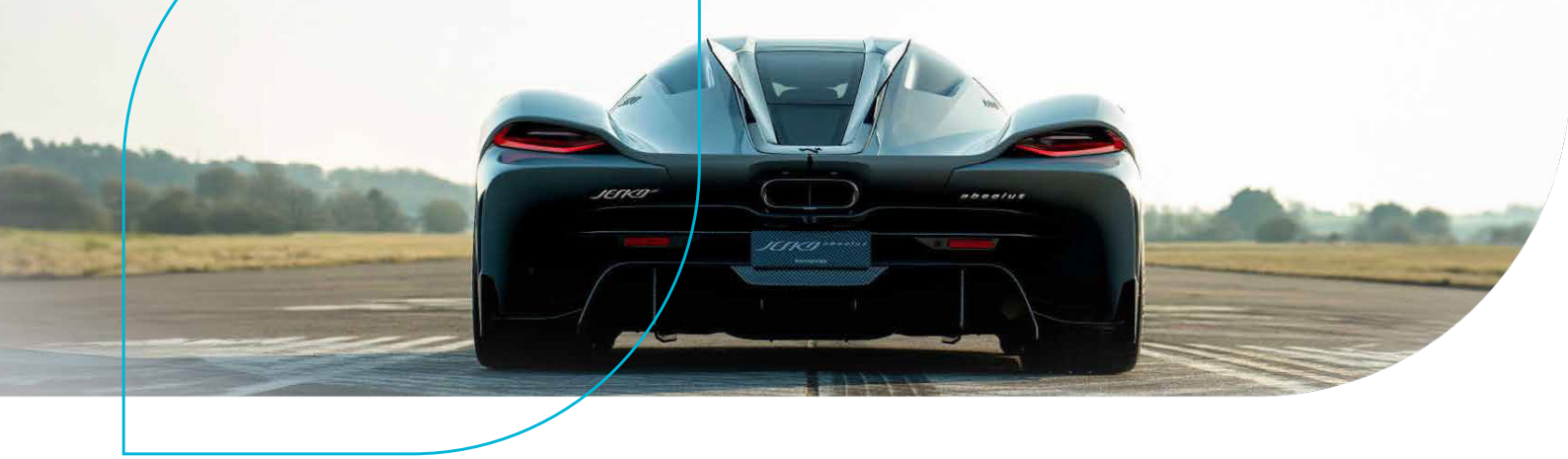


€308 per attendee



\$360 per attendee





How your training is delivered

- PDF training materials (password-protected, yours to keep)
- 30 day access to our video training portal
- Optional extensions available
- Direct access to simulation specialists via email or video call
- Optional face to face training on request

Contact Claytex

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“During the three-days training course from Claytex a good overview of the Modelica modeling language and the Claytex libraries was given. Several tutorials were conducted to deepen the theoretical parts of the training. This is a good way of learning as one gets immediately confronted with the actual problem and needs to solve it. As the focus of the training was particularly on the available motorsports libraries, the training gave good insights in how they are built but also how to best use them. Again, different tasks were performed which showed in an effective way how a full vehicle model could be created out of different sub elements like a half or quarter car.”

Engineer - Motorsport Team

CLAYTEX

A TECHNIA COMPANY

At Claytex, we are a consultancy, software developer, distributor, and training provider specialising in modelling and simulation. Our mission is to help engineers understand complex systems and accelerate product development through advanced simulation technologies.

We develop simulation solutions built on open standards such as Modelica, FMI, OpenSCENARIO, and OpenDRIVE. Our portfolio includes industry-leading tools like Dymola, Reqtify, and rFpro, alongside our own software products, including the VeSyMA suite. In addition, we distribute systems engineering solutions from Dassault Systèmes, rFpro, and specialist Modelica library developers, and we create bespoke simulation tools for unique applications.

As part of TECHNIA, we share a common purpose: reducing complexity so companies can accelerate and excel. Few things are more complex, costly, or time-consuming than bringing new products to market. That's why we help clients deploy solutions that simplify processes, drive innovation, and shorten time to market. With the right mix of technology, expertise, and dedication, we make the journey smoother, empowering businesses to deliver better products, faster.

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