

TESIS DYNAware Training Courses – a worthwhile investment!

In our training courses, you will become acquainted with basic simulation methods as well as efficient use of our software tools for vehicle simulation. We offer special courses for our new simulation framework DYNA4 and the included model components, and for the well-known tools veDYNA and enDYNA. The courses provide an overview of the underlying models and the usage of the software.

Our courses convey a quick entry into the simulation of the vehicle, and provide the theoretical background of our simulation software as well as practical issues for beginners and experienced software users. In any case, you will pick up many ideas to take advantage of the capabilities of our software for your application. All courses are accompanied by hands-on exercises from practical application examples.

Trainings are either held at our training centre in Munich, or we can arrange trainings at your site at any time.

Our experienced training staff will be happy to provide support on customer specific problems and questions. For this purpose, we offer customized courses that we will specifically design to meet your needs. For the training schedule and registration please contact us and tell us about your requirements.

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[Registration form](#) at the end of the document

Overview	Price	Dates
DYNA4 Framework Operator Model configuration and model parameterization, definition of simulation scenarios, result analysis, simulation data management, versioning >>	1190,-* 1290,-	Mar. 12-13, 2 days Oct. 8-9, 2 days
DYNA4 Framework Developer Set up user models, DYNA4 library functions, preparation of simulations on real-time platforms >>	690,-* 750,-	Mar. 14, 1 day Oct. 10, 1 day
DYNA4 Car Professional Model theory and parameter requirements of the vehicle dynamics model components: Chassis, engine, drive train, axles, tires, brakes, soft-ECUs, driver >>	690,-* 750,-	Mar. 15, 1 day Oct. 11, 1 day
DYNA4 Engine Simulation Model theory and parameter requirements of the engine model components: gas path, cylinder, fuel system, exhaust system, soft-ECUs. Definition of scenarios >>	690,-* 750,-	Mar. 15, 1 day Oct. 11, 1 day
DYNA4 Advanced Powertrain Model theory and parameter requirements of the components of the modular powertrain: differential, clutch, transmission, electrical components, HCU. Definition of driving cycles >>	690,-* 750,-	Mar. 16, 1 day Oct. 12, 1 day
DYNA4 Driver Assistance Model theory and model parameters of the traffic environment: sensor model, ACC controller, definition of moving and static objects, Traffic scenarios, road marks, traffic signs >>	690,-* 750,-	Mar. 16, 1 day Oct. 12, 1 day
DYNA4 Task Designer Modeling of complex simulation scenarios with the Task Designer >>	690,-* 750,-	Mar. 19, 1 day Oct. 15, 1 day
enDYNA Fundamentals enDYNA engine model architecture, model theory and parameterization, operation and design of simulation scenarios >>	1690,-* 1790,-	Mar. 20-22, 3 days Oct. 16-18, 3 days
veDYNA Fundamentals Vehicle dynamics model overview, definition of road, maneuvers, driver model, extensions of the base model by means of the Simulink interface >>	1690,-* 1790,-	Mar. 20-22, 3 days Oct. 16-18, 3 days
veDYNA Traffic Environment Traffic and sensor model overview, model extensions by means of the Simulink interface, definition of traffic scenarios >>	690,-* 750,-	Mar. 23, 1day Oct. 19, 1day

Net prices in Euro, * in case of registration prior the begin of the training course

DYNA4 Framework Operator

Objectives

After the course, you will be able to

- Manage all data that define a simulation project
- Use the SVN versioning tool interface
- Parameterize the vehicle model,
- Define test scenarios,
- Run simulations
- Analyze and visualize simulation results

Description

This training provides the essential knowledge to use the simulation software DYNA4 Operator efficiently. Typical application examples will help to use the DYNA4 user interface, data management tools and the versioning tool SVN. You will find a quick start and gain first experiences with model parameterization and defining test scenarios. Complex test scenarios (e.g. automated parameter studies) are enhanced with suitable simulation tasks. Furthermore you will get an overview of the included analysis tools.

Participants

- Engineers working with rapid prototyping or hardware-in-the-loop simulation in the field of vehicle dynamics
- Engineers from all fields requiring realistic simulation of vehicle dynamics

Dates and Course Numbers

2 days: March 12-13, 2012

d4FFOp-0312

2 days: October 8-9, 2012

d4FFOp-1012

Fee

1290.00 € (plus VAT)

1190.00 € (plus VAT) in case of registration 1 month in advance of the course

DYNA4 Framework Developer

Objectives

After the course, you will be able to

- Include your own simulation models in DYNA4
- Integrate DYNA4 library functions into Simulink models
- Build models for the model repository
- Prepare a real-time application

Description

This training provides the essentials of building user-specific simulation models in Simulink and integrating them into DYNA4. Therefore you will learn the model structure and the included library functions in detail.

Typical examples will provide a quick start and first experiences with building user models.

The training also provides essentials for preparation of real-time applications and different hardware platforms.

Participants

- Engineers working with rapid prototyping or hardware-in-the-loop simulation in the field of vehicle dynamics
- Engineers from all fields requiring realistic simulation of vehicle dynamics

Dates and Course Numbers

1 day: March 14, 2012

d4FFDe-0312

1 day: October 10, 2012

d4FFDe-1012

Fee

750.00 € (plus VAT)

690.00 € (plus VAT) in case of registration 1 month in advance of the course

DYNA4 Car Professional

Objectives

After the course, you will be familiar with the

- Theoretical background of the vehicle dynamics model components:
 - Chassis (incl. axle suspension),
 - Wheel system (tire models),
 - Drive train
 - Driver model
- Meaning of the model parameters
- Typical driving cycles for testing vehicle dynamics

Description

This training provides the theoretical background of the vehicle dynamics models and its components, i.e. chassis, axle suspension, tire model, drive train model and driver model. You will find a quick start and gain first experiences with model parameterization, defining test scenarios and performing model configurations. The sessions are accompanied by hands-on exercises from practical situations.

Participants

- Engineers who are involved in the development process of complete vehicle and vehicle components. The applications range from concept studies on the PC to hardware-in-the-loop test rigs.
- Engineers working with rapid prototyping or hardware-in-the-loop simulation in the field of vehicle dynamics
- Engineers from all fields requiring realistic simulation of vehicle dynamics

Dates and Course Numbers

1 day: March 15, 2012 d4CP-0312
1 day: October 11, 2012 d4CP-1012

Fee

750.00 € (plus VAT)
690.00 € (plus VAT) in case of registration 1 month in advance of the course

DYNA4 Engine Simulation

Objectives

After the course, you will be able to

- Understand the theoretical background of the DYNA4 Engine Themos models
- Configure and parameterize the models

Description

This training provides the theoretical background of the DYNA4 Engine Themos model. The sessions are accompanied by hands-on exercises from practical situations. You will find a quick start and gain first experiences with model parameterization, defining test scenarios and performing model configurations.

Participants

- Engineers who are involved in the development process of engine control units, from model based function design to test and pre-calibration at hardware-in-the-loop test rigs

Dates and Course Numbers

1 day: March 15, 2012 d4ES-0312
1 day: October 11, 2012 d4ES-1012

Fee

750.00 € (plus VAT)
690.00 € (plus VAT) in case of registration 1 month in advance of the course

DYNA4 Advanced Powertrain

Objectives

After the course, you will be able to

- Understand the theoretical background of the models that constitute the Advanced Powertrain
 - Mechanical components (clutch, gear unit, differential)
 - Electrical components (engine, battery, converter, etc.)
 - HCU (full hybrid, mild hybrid)
- Configure and parameterize the user-specific models
- Run standard driving cycles

Description

This training provides the theoretical background of the Advanced Powertrain model, its mechanical and electrical components as well as control units. You will find a quick start and gain first experiences with model parameterization, defining test scenarios (driving cycles) and set up the individual powertrain configurations.

The sessions are accompanied by hands-on exercises from practical situations.

Participants

- Engineers who are involved in the development process of hybrid and electric vehicles, from model based function design to test and pre-calibration at hardware-in-the-loop test rigs

Dates and Course Numbers

1 day: March 16, 2012 d4AP-0312
1 day: October 12, 2012 d4AP-1012

Fee

750.00 € (plus VAT)
690.00 € (plus VAT) in case of registration 1 month in advance of the course

DYNA4 Driver Assistance

Objectives

After the course, you will be able to

- Understand the theoretical background of the traffic environment:
 - Moving and static objects
 - Sensor model
 - ACC controller
 - Traffic Scenarios
 - Road marks and traffic signs
- Configure and parameterize the model
- Define test scenarios

Description

This training provides the theoretical background of the traffic environment components.

You will find a quick start and gain first experiences with model parameterization, defining test scenarios and performing model configurations.

The sessions are accompanied by hands-on exercises from practical situations.

Participants

- Engineers who are involved in the development process of sensor based or camera based driver assistance systems

Dates and Course Numbers

1 day: March 16, 2012 d4AP-0312
1 day: October 12, 2012 d4AP-1012

Fee

750.00 € (plus VAT)
690.00 € (plus VAT) in case of registration 1 month in advance of the course

DYNA4 Task Designer

Objectives

After the course, you will be able to

- Model user-specific simulation scenarios in DYNA4
- Use the Matlab interface efficiently to include preprocessing and postprocessing in the simulation

Description

This training provides the essentials to model user specific simulation scenarios with the task designer. This also includes simulations which have to be executed recursively and interdependently. Therefore the Task Designer and the Matlab interface are detailed.

Typical applications are demonstrated and practiced by means of examples which can include interactive input or automated tasks.

Participants

- Development and application engineers who work as experts in model based simulations and who have to create reproducible simulation scenarios
- Engineers from all fields of model based development

Dates and Course Numbers

1 day: March 19, 2012

d4TD-0312

1 day: October 15, 2012

d4TD-1012

Fee

750.00 € (plus VAT)

690.00 € (plus VAT) in case of registration 1 month in advance of the course

enDYNA Fundamentals

Objectives

After the course, you will be able to

- Control the simulation environment and make efficient use of all software features
- Understand the theoretical background of the enDYNA basic and enDYNA Themos models
- Configure and parameterize the models

Description

This training provides the essentials of the theoretical background and the operation of enDYNA. The sessions are accompanied by hands-on exercises from practical situations. You will find a quick start and gain first experiences with model parameterization, defining test scenarios and performing model configurations.

Participants

- Engineers and project managers, who are involved in the development process of engine control units, from model based function design to test and pre-calibration at hardware-in-the-loop test rigs

Dates and Course Numbers

3 days: March, 20-22, 2012

edy3F-0312

3 days: October 16-18, 2012

edy3F-1012

Fee

1790.00 € (plus VAT)

1690.00 € (plus VAT) in case of registration 1 month in advance of the course

veDYNA Fundamentals

Objectives

After the course, you will be able to

- Efficiently operate the veDYNA graphical user interface
- Configure and parameterize vehicle models
- Define virtual driving maneuvers
- Apply user-specific model enhancements in the Simulink-model

Description

This training provides the essentials of the theoretical background and the operation of veDYNA. The basic theory of the vehicle model as well as the graphical user interface of veDYNA are introduced and deepened by typical application examples. You will make some first experiences with the definition and application of self-defined virtual driving tests and the programming of automated tests using the MATLAB interface. Another focus is on the Simulink interface, which is used, e.g. for the input of measured maneuver data or for extending the delivered standard vehicle model.

Participants

- Engineers working with rapid prototyping or hardware-in-the-loop simulation in the field of vehicle dynamics
- Engineers from all fields requiring realistic simulation of vehicle dynamics

Dates and Course Numbers

3 days: March, 20-22, 2012

vdy3F-0312

3 days: October 16-18, 2012

edy3F-1012

Fee

1790.00 € (plus VAT)

1690.00 € (plus VAT) in case of registration 1 month in advance of the course

veDYNA Traffic Environment

Objectives

After the course, you will be able to

- Efficiently use the veDYNA Traffic Environment for your application
- Define own traffic scenarios
- Configure own sensor models

Description

This course provides a quick start with the definition of virtual traffic environments using the veDYNA Traffic Environment Add-On. You will become familiar with the Simulink traffic model, especially the sensor model as well as possibilities of individual adjustments of the model to customer specific requirements. Typical applications are demonstrated and practiced by means of examples. Another focus is on the configuration of traffic scenarios.

Participants

- Development and application engineers, who already know veDYNA and want to use advanced features of the software
- Development engineers and project managers, who are involved in the development process of driver assistance systems, from model based function design to testing at hardware-in-the-loop environments

Dates and Course Numbers

1 day: March, 23, 2012

vdy3T-0312

1 day: October 19, 2012

vdy3T-1012

Fee

750.00 € (plus VAT)

690.00 € (plus VAT) in case of registration 1 month in advance of the course



TESIS DYNAware Training Registration

Fax: +49 89 747377 99, email: training.dynaware@tesis.de

Training Course/Course Number Date

Last Name First Name

Title Profession

Company Department

Street/P.O. Box

Postal Code City/Country

Phone/Fax Email

With this signature I register for the above training and accept the conditions of participation.

Date, Signature

Registration

Please register at least two weeks before the training. If you register more than one month in advance of the start of the training course, we can offer more favorite fees. Send us the registration form filled in for each participant by fax or mail, or send us an e-mail. We will acknowledge your participation by sending you a letter of confirmation and the bill. You will also get some information about accommodation. Please arrange your accommodation and travel yourself.

After a binding registration you will receive detailed arrival information. The number of participants is limited to 8 persons in order to give you most individual support. There is no problem to switch participants, just inform us.

In case of cancelation 14 days before the training begins we have to charge you a € 25 handling fee, we will have to charge 50% of the training fee for later cancelations.

If there are too few registrations for the course, TESIS DYNAware preserves the right to cancel a training session 7 days before the announced date at the latest.

Do you have further questions regarding the trainings? Mrs. Linda Schroll is happy to answer them under +49 89 747377-18.

General Remarks

- Experience with MATLAB/Simulink is required for the DYNA4, enDYNA and veDYNA courses.
- Fees include printed training material (English), lunch and beverages.
- Lectures are given in German or English, as desired.

Location

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