

# Simulink: Basics of System and Algorithm Modeling

Course code: SIMULINK1

You will learn how to work with the basic tools of the Simulink environment. You will be introduced to creating models that provide insight into the behavior of systems using simulations. You will learn how to model different types of systems and algorithms in Simulink and how to connect algorithm models with dynamic system models. The joint simulation of systems and algorithms is one of the core principles of the Model-Based Design approach. Additionally, you will become familiar with tools that help visualize the results and compare them. You will also learn how to supplement your models with programs written in MATLAB.

## Who is the course for

Intended for everyone who is starting to work with the Simulink environment.

## What we teach you

- Introduction to the Simulink environment
- Working with the simulation schematic editor
- Basic procedures for modeling systems
- Modeling systems in continuous time, discrete time, and their combinations
- Using parameters in simulation models
- Running and controlling simulations
- Visualizing the resulting waveforms
- Organizing models into multiple levels using subsystems

## Required skills

- Knowledge at the level of the "MATLAB Basics: Working with the Environment" training.

## Teaching materials

- Printed lecture in Czech/Slovak language, certificate of completion.

## Covered tools:

- Basic Simulink module

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