

Simulink Fundamentals

OEM: MathWorks • Duration: 2 Days (16 hrs) • Code: MW-SIMULINK-FUNDAMENTALS

COURSE MODULES & TOPICS

Day 1 of 2

Creating and Simulating a Model

- Introduction to the Simulink interface
- Potentiometer system
- Generating and visualizing signals
- Simulation and analysis
- Solver behavior
- Algebraic loops

Modeling Programming Constructs

- Comparisons and decision statements
- Actuator logic system
- Zero crossings
- MATLAB Function block

Modeling Discrete Systems

- Discrete signals and states
- PI controller system
- Discrete transfer functions and state-space systems
- Multirate discrete systems

Modeling Continuous Systems

- Continuous states
- Throttle system
- Physical boundaries
- Continuous transfer functions and state-space systems
- Simulation speed and accuracy

Day 2 of 2

Developing Model Hierarchy

- Ports and subsystems
- Masks
- Vector and bus signals

Modeling Conditionally Executed Algorithms

- Conditionally executed subsystems
- Enabled subsystems
- Triggered subsystems
- Input validation model

Referencing Model Components

- Referencing workflows
- Subsystem referencing
- Model referencing
- Root-level inputs and outputs
- Model workspace
- Model reference simulation modes
- Model dependencies

Creating Libraries

- Creating and populating libraries
- Managing library links
- Adding a library to the Simulink Library Browser