

Simulink Model Management and Architecture

Prerequisites

MATLAB Fundamentals and *Simulink for System and Algorithm Modeling* . This course is intended for intermediate or advanced Simulink users.

Day 1 of 2	
Model-Based Design	Objective: Get a brief overview of how Simulink models can be used in a traditional design process. Discuss where the material covered in this course fits into that process.
Requirements Linking and Interface Control	Objective: Link a Simulink model to system requirements, illustrate data flow, and define system interfaces. Component stubs Requirements linking Component interfaces Bus objects
Model Architecture	Objective: Discuss the pros and cons of the different features used for organizing a Simulink model into separate components. System component considerations Virtual subsystems Atomic subsystems Model references Libraries Component variants
Project Management	Objective: Discuss how to effectively organize a project (containing models, data, documentation, etc.) and perform configuration management tasks. Project setup File shortcuts and labels File dependencies and impact Referenced projects Source control integration File differences

Day 2 of 2	
Data Management	Objective: Explore the data dependencies of a Simulink model and learn best practices for managing a Simulink model's data. Workspace precedence Parameter management Saving and loading data Data dictionaries

Data Customization	<p>Objective: Control signals, parameters, and data types to affect the behavior of code generated from Simulink models.</p> <ul style="list-style-type: none">Signals and parametersSimulink data objectsParameter tunabilityData types in Simulink
Modeling Standards	<p>Objective: Explore how to set up and enforce modeling standards, check for common modeling errors, and optimize model performance.</p> <ul style="list-style-type: none">Modeling standardsModel AdvisorReporting resultsAdditional Simulink advisorsTemplates
Reporting	<p>Objective: Discuss the methods of automatically creating reports and documentation from Simulink models.</p> <ul style="list-style-type: none">Web viewsStandard reportsCustom reports