

# Simulation-Based Testing with Simulink

## Prerequisites

[MATLAB Fundamentals](#) and [Simulink for System and Algorithm Modeling](#)

This course is intended for intermediate or advanced Simulink users.

Day 1 of 1	
<b>Verification and Validation in Model-Based Design</b>	<p><b>Objective:</b> Introduce verification and validation in the Simulink environment and discuss how it fits in to a typical project workflow using Model-Based Design.</p> <ul style="list-style-type: none"><li>Continuous test and verification</li><li>Types of verification</li><li>Electronic throttle control project</li></ul>
<b>Developing Test Cases</b>	<p><b>Objective:</b> Create time-based and logic-based test cases for a Simulink model.</p> <ul style="list-style-type: none"><li>Defining test cases</li><li>Generating test harnesses</li><li>Creating and importing test inputs</li><li>Incorporating logic in tests</li></ul>
<b>Analyzing Test Results</b>	<p><b>Objective:</b> Analyze test results of a Simulink simulation, both during and after the simulation.</p> <ul style="list-style-type: none"><li>Performing requirements-based assessments</li><li>Logging, inspecting, and comparing test results</li><li>Collecting model coverage</li></ul>
<b>Building Test Suites</b>	<p><b>Objective:</b> Create repeatable groups of tests and automatically generate reports from the test results.</p> <ul style="list-style-type: none"><li>Creating test files</li><li>Configuring simulation, baseline, and equivalence tests</li><li>Viewing and documenting test results</li></ul>