



# Expand Your Knowledge

TRAINING SERVICE

SciEngineer's training courses are designed to help organizations and individuals close skills gaps, keep up-to-date with the industry-accepted best practices and achieve the greatest value from MathWorks® and COMSOL® Products.

[SCIENGINEER.COM](https://www.sciengineer.com)



# Training service

## THE VALUE OF AN EXPERIENCED TRAINING EXPERT

Our training courses are developed by training engineers with exclusive product knowledge gained from working closely with product developers. They acquire significant hands-on experience by using new products months before they are released and are always current on new capabilities.

### Learn Relevant Skills

Each course contains a set of learning objectives designed to help participants quickly master necessary skills. Our hands-on approach allows participants to practice, apply, and evaluate their knowledge in the classroom.

### Receive Expert Instruction

Our training employs industry-accepted best practices for adult learning and technical instruction, and has developed course content that facilitates a "Presentation, Practice, Test" approach to learning. All training engineers have been selected based on their theoretical knowledge, technical education, experience, and teaching ability.

### Increase Team Success Rates

According to post-training surveys, teams who receive 40 hours of training meet project objectives three times as often as those who receive 30 hours or less. This increase in training time raises the likelihood of meeting objectives by 90%.

# Training service

ACHIEVE A QUICK PROGRESS, ADVANCE YOUR SKILLS  
AND LEARN THROUGH PRACTICE!

Let's start with identifying your learning path and selecting the perfect courses for you, best match-ing with the knowledge and the level of expertise you want to achieve. Our courses cover multiple areas and industries, tailored to meet your needs and delivered by engineers with field expertise and skilled in training techniques.

What is the difference between theory and practice? Well, in theory, nothing. But practice will help you better boost your knowledge.

With our hands-on training, you will dive deep into the features and work together in the software to achieve confidence and practical knowledge. You will learn best practices and useful tips and tactics through a live interactive session and immediately try these out along the trainer's guide.

Keep yourself up-to date on the latest MathWorks® and COMSOL® products with our training programs.

98% OF ATTENDEES RATED OUR INSTRUCTORS AS  
SUBJECT MATTER EXPERTS

96% OF ATTENDEES SURVEYED WOULD RECOM-  
MEND THE COURSE TO A FRIEND OR COLLEAGUE

144% AVERAGE INCREASE IN COMPETENCE WITH  
MATLAB AFTER TRAINING

95% OF ATTENDEES SAID COURSEWORK HAD  
REAL-WORLD APPLICATION TO THEIR JOBS

60 AVERAGE NUMBER OF DEVELOPMENT HOURS TO  
CREATE ONE HOUR OF TRAINING

104% AVERAGE INCREASE IN PRODUCTIVITY WITH  
MATLAB AFTER TRAINING

# COMSOL

## FUNDAMENTAL

- COMSOL Multiphysics

## INTERMEDIATE

- Acoustics Modeling in COMSOL Multiphysics
- COMSOL Multiphysics Fluid Flow and Heat Transfer
- AC/DC Electromagnetics Simulations
- Heat Transfer Modeling in COMSOL Multiphysics
- Geometry, CAD and Meshing
- Structural Mechanics Intensive Course
- Optimization in COMSOL Multiphysics

# MATLAB®

## FUNDAMENTAL

- MATLAB Fundamentals
- MATLAB Fundamentals for Automotive Applications
- MATLAB Fundamentals for Aerospace Applications
- MATLAB for Financial Applications

## INTERMEDIATE

- Wireless Communications Systems Design with MATLAB and USRP Software-Defined Radios
- Machine Learning with MATLAB
- Deep Learning with MATLAB
- MATLAB for Data Processing and Visualization
- MATLAB Programming Techniques
- Statistical Methods in MATLAB
- Optimization Techniques in MATLAB
- Image Processing with MATLAB
- Building Interactive Applications in MATLAB
- Processing Big Data with MATLAB
- Accelerating and Parallelizing MATLAB Code
- Signal Pre-processing and Feature Extraction for Data Analytics with MATLAB
- Signal Processing with MATLAB
- Predictive Maintenance with MATLAB
- Computer Vision with MATLAB
- Automated Driving with MATLAB
- Object-Oriented Programming with MATLAB
- Reinforcement Learning in MATLAB and Simulink - NEW
- Deep Learning for Signals in MATLAB - NEW

## ADVANCED

- MATLAB to C with MATLAB Coder
- Designing LTE and LTE Advanced Physical Layer Systems with MATLAB
- Upgrading from LTE to 5G with MATLAB
- Sensor Fusion and Object Tracking with MATLAB - NEW
- Advanced MATLAB Application Development - NEW
- Modeling Radar Systems with MATLAB - NEW

# Simulink®

## FUNDAMENTAL

- Simulink Fundamentals
- Simulink Fundamentals for Automotive Applications
- Signal Processing with Simulink
- Simulink Fundamentals for Aerospace Applications

## INTERMEDIATE

- Communication Systems Modeling with Simulink
- Control System Design with MATLAB and Simulink
- Integrating C Code with Simulink
- Modeling Physical Systems with Simscape
- Modeling Driveline Systems with Simscape
- Modeling Fluid Systems with Simscape
- Modeling Electrical Power Systems with Simscape
- Modeling Multibody Mechanical Systems with Simscape
- Power Electronics Control Design with Simulink and Simscape
- Battery Modeling and Algorithm Development with Simulink
- Applying Model-Based Design for ISO 26262
- Simulink for Analog Mixed-Signal Design - NEW
- Reinforcement Learning in MATLAB and Simulink - NEW

## ADVANCED

- Programming Xilinx Zynq SoCs with MATLAB and Simulink
- Embedded Linux and System Integration with Zynq
- Simulation-Based Testing with Simulink
- Design Verification with Simulink
- Simulink Model Management and Architecture
- Generating HDL Code from Simulink
- DSP for FPGAs
- System Composer for Architecture Modeling - NEW
- Simulink Real-Time HDL Workflow with Speedgoat Hardware - NEW
- Model-Based Design for DO-178C/DO-331 Compliance - NEW
- Simulink for Analog and Mixed-Signal Verification - NEW
- Programming Zynq RF SoCs Using Simulink - NEW

# Code Generation

## FUNDAMENTAL

- Testing Generated Code in Simulink

## ADVANCED

- Generating HDL Code from Simulink
- Programming Xilinx Zynq SoCs with MATLAB and Simulink
- Embedded Linux and System Integration for Zynq
- Embedded Coder for Production Code Generation (2 days)
- Embedded Coder for Production Code Generation (3 days)
- MATLAB to C with MATLAB Coder
- Code Generation for AUTOSAR Software Components
- Software-Defined Radio with Zynq Using Simulink
- Real-Time Testing with Simulink Real-Time and Speedgoat Hardware

# Stateflow

## FUNDAMENTAL

- Stateflow for Logic-Driven System Modeling
- Stateflow for Automotive Applications

# Polyspace

## INTERMEDIATE

- Reviewing Polyspace Results - NEW

## ADVANCED

- Polyspace for C/C++ Code Verification

# RoadRunner

## INTERMEDIATE

- Designing 3D Scenes and Scenarios with RoadRunner



# Explore Courses by Focus Areas

AI, DATA SCIENCE AND STATISTICS

PROGRAMMING AND APPLICATION  
DEVELOPMENT

IMAGE PROCESSING AND COMPUTER  
VISION

SIGNAL PROCESSING AND  
COMMUNICATIONS

MODELING AND SIMULATION

CONTROL AND ALGORITHM DESIGN

PHYSICAL MODELING

HDL CODE GENERATION

C CODE GENERATION

# AI, Data Science and Statistics

## FUNDAMENTAL

- MATLAB Fundamentals

## INTERMEDIATE

- MATLAB for Data Processing and Visualization
- Machine Learning with MATLAB
- Deep Learning with MATLAB
- Statistical Methods in MATLAB
- Signal Pre-processing and Feature Extraction for Data Analytics with MATLAB
- Accelerating and Parallelizing MATLAB Code
- Predictive Maintenance with MATLAB
- Optimization Techniques in MATLAB
- Processing Big Data with MATLAB
- Reinforcement Learning in MATLAB and Simulink - NEW

# Programming and Application Development

## FUNDAMENTAL

- MATLAB Fundamentals

## INTERMEDIATE

- MATLAB Programming Techniques
- Accelerating and Parallelizing MATLAB Code
- Optimization Techniques in MATLAB
- Building Interactive Applications in MATLAB
- Object-Oriented Programming with MATLAB
- Advanced MATLAB Application Development - NEW

# Image Processing and Computer Vision

## FUNDAMENTAL

- MATLAB Fundamentals

## INTERMEDIATE

- Image Processing with MATLAB
- Computer Vision with MATLAB
- Automated Driving with MATLAB
- Designing 3D Scenes and Scenarios with RoadRunner

# Signal Processing and Communications

## FUNDAMENTAL

- MATLAB Fundamentals
- Signal Processing with Simulink

## INTERMEDIATE

- Signal Processing with MATLAB
- Signal Preprocessing and Feature Extraction for Data Analytics with MATLAB
- Wireless Communications Systems Design with MATLAB and USRP Software-Defined Radios
- Communication Systems Modeling with Simulink
- Sensor Fusion and Object Tracking with MATLAB - NEW
- Simulink for Analog Mixed-Signal Design - NEW
- Deep Learning for Signals in MATLAB - NEW

## ADVANCED

- Designing LTE and LTE Advanced Physical Layer Systems with MATLAB
- Upgrading from LTE to 5G with MATLAB
- Simulink for Analog and Mixed-Signal Verification - NEW
- Modeling Radar Systems with MATLAB - NEW

# Modeling and Simulation

## FUNDAMENTAL

- MATLAB Fundamentals
- Simulink Fundamentals

## INTERMEDIATE

- Integrating C Code with Simulink
- Designing 3D Scenes and Scenarios with RoadRunner
- Applying Model-Based Design for ISO 26262

## ADVANCED

- Simulink Model Management and Architecture
- Simulation-Based Testing with Simulink
- Design Verification with Simulink
- Real-Time Testing with Simulink Real-Time and Speedgoat Hardware
- System Composer for Architecture Modeling - NEW
- Model-Based Design for DO-178C/DO-331 Compliance - NEW

# Control and Algorithm Design

## FUNDAMENTAL

- MATLAB Fundamentals
- Simulink Fundamentals
- Stateflow for Logic-Driven System Modeling

## INTERMEDIATE

- Control System Design with MATLAB and Simulink
- Reinforcement Learning in MATLAB and Simulink - NEW
- Battery Modeling and Algorithm Development with Simulink
- Reviewing Polyspace Results - NEW

## ADVANCED

- Applying Model-Based Design for ISO 26262 - NEW

# Physical Modeling

## FUNDAMENTAL

- MATLAB Fundamentals
- Simulink Fundamentals

## INTERMEDIATE

- Modeling Physical Systems with Simscape
- Modeling Multibody Mechanical Systems with Simscape
- Modeling Fluid Systems with Simscape
- Power Electronics Control Design with Simulink and Simscape
- Modeling Electrical Power Systems with Simscape
- Modeling Driveline Systems with Simscape
- Battery Modeling and Algorithm Development with Simulink



# HDL Code Generation

## FUNDAMENTAL

- MATLAB Fundamentals
- Signal Processing with Simulink

## INTERMEDIATE

- Generating HDL Code from Simulink
- DSP for FPGAs
- Programming Xilinx Zynq SoCs with MATLAB and Simulink
- Software-Defined Radio with Zynq Using Simulink
- Embedded Linux and System Integration for Zynq

## ADVANCED

- Simulink Real-Time HDL Workflow with Speedgoat Hardware - NEW
- Programming Zynq RF SoCs Using Simulink - NEW

# C Code Generation

## INTERMEDIATE

- MATLAB Fundamentals
- Simulink Fundamentals

## ADVANCED

- Real-Time Testing with Simulink Real-Time and Speedgoat Hardware
- Embedded Coder for Production Code Generation (2 days)
- Embedded Coder for Production Code Generation (3 days)
- Code Generation for AUTOSAR Software Components
- MATLAB to C with MATLAB Coder
- Polyspace for C/C++ Code Verification
- Applying Model-Based Design for ISO 26262 - NEW



Course formats support a wide range of learning styles and organizational requirements. If you can't find what you're looking for, our training staff will work with you to establish knowledge gaps and develop a customized plan tailored to your unique needs.