DESTINATION:
KNOWLEDGE

TRAINING SERVICES

mathworks.com/get-training
## Course List

Partner with MathWorks on your learning journey. Find everything you need to get started, including course descriptions and additional information, at [mathworks.com/get-training](http://mathworks.com/get-training).

### 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 Preprocessing 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

**ADVANCED**
- MATLAB to C with MATLAB Coder™
- Designing LTE and LTE Advanced Physical Layer Systems with MATLAB

### SIMULINK®

**FUNDAMENTAL**
- Simulink for System and Algorithm Modeling
- Simulink for Automotive System Design
- Signal Processing with Simulink
- Simulink for Aerospace System Design

**INTERMEDIATE**
- Communication Systems Modeling with Simulink
- Control System Design with MATLAB and Simulink
- Integrating 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

**ADVANCED**
- Programming Xilinx® Zynq® SoCs with MATLAB and Simulink
- Embedded Linux® and System Integration with Zynq
- Embedded Coder® for Production Code Generation
- 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

### 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 with Zynq
- Embedded Coder® for Production Code Generation
- 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

### POLYSPACE® PRODUCTS

**ADVANCED**
- Polyspace for C/C++ Code Verification
Why Invest in MathWorks Training?

We have the exclusive product knowledge to give you expert instruction. Our training employs industry-accepted best practices for adult learning and technical instruction. It covers the basics of working with MATLAB and Simulink as well as intermediate and advanced techniques that address complex workflows and niche applications.

Investing in proven training solutions from MathWorks produces numerous benefits for both the short and long term.

- **Improve efficiency and productivity.**
  The cost of engineers learning on their own can quickly exceed the cost of a class. MathWorks has done the research and built a curriculum that enables users to leverage our tools and hit the ground running.

- **Learn from MATLAB and Simulink experts.**
  MathWorks training instructors are engineers themselves, with advanced degrees and years of industry experience. In addition, they hold instructor/facilitator certification.

- **Access the most up-to-date courses.**
  Course developers use new products months before they are released and are always current with the latest trends and software features, ensuring you stay competitive.

- **Get hands-on, personalized training and instruction.**
  Instructors use a variety of techniques—including a “presentation, practice, test” approach to learning—to reinforce concepts and build proficiency.

- **Achieve measurable results.**
  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%.

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**Improve efficiency and productivity.**

- 98% of attendees rated our instructors as subject matter experts
- 95% of attendees said coursework had real-world application to their jobs
- 96% of attendees surveyed would recommend the course to a friend or colleague

**Access the most up-to-date courses.**

- 144% average increase in competence with MATLAB after training
- 60 average number of development hours to create one hour of training
- 104% average increase in productivity with MATLAB after training
Try a Course Now for Free

Introductory courses such as MATLAB Onramp and Simulink Onramp get you up to speed quickly and easily. Each highly interactive tutorial contains a set of learning objectives designed to help participants learn the essentials and master necessary skills right within the product. Our hands-on approach enables you to immediately practice, apply, and evaluate your knowledge.

“...The quality of the training from MathWorks was truly beyond my expectations. The training materials, examples, and exercises were prepared to ensure quick ramp-up in learning the tool. I feel more confident taking on greater challenges in my job, and my skills and job marketability have been boosted as a result.”

— ARASH SOLEIMANI, BOMBARDIER TRANSPORTATION

Have MathWorks Come to You

Available worldwide, onsite training is ideal for larger groups or those who need customized instruction. We train thousands of customers every year, and cover a range of industrial applications. By tapping into a vast content library as well as developing material from scratch, instructors can tailor the curriculum with company- or industry-specific examples relevant to your team’s specific goals and address challenges familiar to attendees.

MathWorks training services allow organizations to address their unique training needs using material that has been refined from our years of experience. As a result of this partnership, customers get more out of their learning investment and maximize their productivity.
Find a Format to Suit Your Needs

Advance your MATLAB and Simulink skills how, when, and where it works best for you. Course formats accommodate a variety of learning styles and organizational requirements. If you don’t see what you’re looking for, MathWorks training staff are available to consult with you and develop a customized plan.

INSTRUCTOR-LED CLASSROOM
Courses are offered at MathWorks facilities, your location, and public sites around the world.

INSTRUCTOR-LED ONLINE
Live, online courses are led in real time by MathWorks instructors and contain the same course content and materials used in the classroom setting.

SELF-PACED
Learn MATLAB and Simulink online with our interactive courses containing demonstrations, exercises, and quizzes. The flexible format suits busy schedules, and users have around-the-clock access for six months.

“The training we received onsite was customized to our needs, which accelerated our ramp-up. We learned how to make our code more robust, maintainable, and efficient.”

— MARCUS VELTUM, HELABA INVEST
Get Started on the Right Path

Learning paths aid in building a proper foundation with MATLAB and Simulink and enable you to get the most out of your products. The following pages provide a suggested sequence of courses based on your particular area of interest. For information on prerequisites and other focus areas not listed here, visit mathworks.com/get-training.
Not all courses are applicable to everyone. Please choose the courses that best meet your individual needs.

**Data Science**

**FUNDAMENTAL**

- MATLAB Fundamentals

**INTERMEDIATE**

- MATLAB for Data Processing and Visualization
- Machine Learning with MATLAB
- Deep Learning with MATLAB
- Statistical Methods in MATLAB
- Signal Processing and Feature Extraction for Data Analytics with MATLAB
- Predictive Maintenance with MATLAB
- Accelerating and Parallelizing MATLAB Code
- Optimization Techniques in MATLAB
- Processing Big Data with MATLAB
Not all courses are applicable to everyone. Please choose the courses that best meet your individual needs.

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

Also available in an online, self-paced format
= Part of the MathWorks certification program

mathworks.com/get-training
### Image Processing and Computer Vision

**Focus Area**

Not all courses are applicable to everyone. Please choose the courses that best meet your individual needs.

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<tr>
<th>Intermediate Course Options</th>
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<tbody>
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<td>Image Processing with MATLAB</td>
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<tr>
<td>Computer Vision with MATLAB</td>
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<td>Automated Driving with MATLAB</td>
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**Fundamental Course Options**

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<tr>
<th>Fundamental Course Options</th>
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<tbody>
<tr>
<td>MATLAB Fundamentals</td>
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= Also available in an online, self-paced format  
= Part of the MathWorks certification program
Signal Processing and Communications

**FUNDAMENTAL**

- MATLAB Fundamentals
- Signal Processing with Simulink

**INTERMEDIATE**

- Signal Processing with MATLAB
- Signal Processing and Feature Extraction for Data Analytics with MATLAB
- Wireless Communications Systems Design with MATLAB and USRP® Software-Defined Radios
- Communications Systems Modeling with Simulink

**ADVANCED**

- Designing LTE and LTE Advanced Physical Layer Systems with MATLAB
FOCUS AREA

Not all courses are applicable to everyone. Please choose the courses that best meet your individual needs.

Modeling and Simulation

FUNDAMENTAL

MATLAB Fundamentals

Simulink for System and Algorithm Modeling

INTERMEDIATE

Integrating Code with Simulink

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

Also available in an online, self-paced format

Part of the MathWorks certification program

mathworks.com/get-training
### FOCUS AREA
Not all courses are applicable to everyone. Please choose the courses that best meet your individual needs.

# Control and Algorithm Design

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<th>FUNDAMENTAL</th>
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<tbody>
<tr>
<td>MATLAB Fundamentals</td>
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<tr>
<td>Simulink for System and Algorithm Modeling</td>
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<td>Stateflow for Logic-Driven System Modeling</td>
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<tr>
<th>INTERMEDIATE</th>
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<tr>
<td>Control System Design with MATLAB and Simulink</td>
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Also available in an online, self-paced format
Part of the MathWorks certification program

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### COURSE LIST

- Data Science
- 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

### WHY MATHWORKS?

### COURSE FORMATS

### FOCUS AREAS

### REGISTRATION

mathworks.com/get-training
Not all courses are applicable to everyone. Please choose the courses that best meet your individual needs.

### Physical Modeling

#### FUNDAMENTAL
- MATLAB Fundamentals
- Simulink for System and Algorithm Modeling

#### 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

*Also available in an online, self-paced format*  
*Part of the MathWorks certification program*
FOCUS AREA | Not all courses are applicable to everyone. Please choose the courses that best meet your individual needs.

## HDL Code Generation

### FUNDAMENTAL
- MATLAB Fundamentals
- Signal Processing with Simulink

### ADVANCED
- Growing 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

Also available in an online, self-paced format
Part of the MathWorks certification program
Not all courses are applicable to everyone. Please choose the courses that best meet your individual needs.

### FUNDAMENTAL

- MATLAB Fundamentals
- Simulink for System and Algorithm Modeling

### ADVANCED

- Real-Time Testing with Simulink Real-Time and Speedgoat Hardware
- Embedded Coder for Production Code Generation
- Code Generation for AUTOSAR Software Components
- MATLAB to C with MATLAB Coder
- Polyspace for C/C++ Code Verification

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*Also available in an online, self-paced format*  
*Part of the MathWorks certification program*
MathWorks Training Information

ASSESS YOUR MATLAB AND SIMULINK KNOWLEDGE

Should you start with MATLAB Fundamentals or Simulink for System and Algorithm Modeling? Completing the recommended assessment prior to registering for a course will allow you to confirm what you know and confidently build the right curriculum for you. Contact your sales representative to see whether you qualify for this free service.

GUARANTEED TO RUN

We understand making plans to attend training sessions is a commitment on your part and that cancellations can be disruptive. When you register for a course that is “Guaranteed to Run,” you can be confident that it won’t be cancelled or rescheduled for any reason.

PURCHASE TRAINING IN VOLUME

Maximize your training budget by purchasing training in volume, which gives you discounts on future courses. Credits may be applied to any classroom, onsite, or online course within one year of purchase.

MATHWORKS CERTIFICATION PROGRAM

Obtain Certified MATLAB Associate or Certified MATLAB Professional status, and prove your MATLAB proficiency to customers, industry peers, and employers. For organizations, certification is a strategic investment that pays off through increased productivity and project success. MATLAB training courses cover all concepts tested in exam questions. For locations of the more than 700 testing centers, dates, and fees, visit mathworks.com/certification.

TWO EASY WAYS TO REGISTER

Visit: mathworks.com/get-training

Call: Australia: +61-2-8669-4700
India: +91-80-6632-6000
The Netherlands: +31-40-2156700
Nordic Region: +46-8-5051-6900
Switzerland: +41-31-950-60-20
United Kingdom: +44-1223-226700
United States and Canada: 508-647-7000

The MathWorks BV is a Cedeo-approved training organization.

MathWorks is registered with GARP as an Approved Provider of Continuing Professional Development (CPD) credits.

For course descriptions, classroom offerings in your area, and a complete schedule, visit mathworks.com/get-training

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