

# Industrial Automation & Machinery Curriculum



Gamax Laboratory Solutions helps you overcome your complex engineering challenges. We help a broad spectrum of industries to accelerate the innovation process in the field of R&D. As the sole authorized regional representative for Eastern Europe since 1996, we provide over two decades of expertise with Mathworks, Comsol, and Speedgoat products, software, and training. We offer consultation in project planning and design, research, virtual prototyping, testing, and go to market simulations.

#### **Building Interactive MATLAB Programming MATLAB for Data Processing** Signal Preprocessing and Applications in MATLAB **Techniques** and Visualization **Feature Extraction for Data** (1 day) (2 days) **Analytics with MATLAB** (1 day) (1 day) Accelerating and Parallelizing MATLAB Code (2 days) **Object-Oriented Machine Learning with MATLAB Fundamentals Processing Big Data with Programming with MATLAB** MATLAB MATLAB (3 days) (2 days) (1 day) (2 days) Advanced MATLAB **Predictive Maintenance with** Application Development<sup>‡</sup> MATLAB (2 days) (2 days) Signal Processing with MATLAB Generating HDL Code from (2 days) Signal Processing with Simulink Simulink (2 days) **Designing Robotics** (3 days) Algorithms with MATLAB (1 day) Simulink for System and Algorithm Modeling (2 days) **Embedded Coder for** Real-Time Testing with **Generating HDL Code** Simulink Real-Time HDL Workflow Simulink Real-Time and **Production Code** from Simulink with Speedgoat Hardware ‡ Speedgoat Generation (2 days) (2 days) (2 days) (2 days) Reinforcement Learning in **Modeling Physical Control System Design with** MATLAB and Simulink<sup>‡</sup> Systems with Simscape **MATLAB** and Simulink **Testing Generated Code in** (1 day) (1 day) (2 days) Simulink (1 day) **Modeling Multibody Modeling Electrical Power Modeling Fluid Systems Mechanical Systems with** Systems with Simscape with Simscape

(1 day)

Simulink Model Management

and Architecture

(2 days)

(1 day)

Simulation-Based Testing

with Simulink

(1 day)

Polyspace for C/C++ Code

Verification

(2 days)

Simscape

(1 day)

Stateflow for Logic-Driven

System Modeling

(2 days)

Integrating Code with Simulink (1 day)

#### Prerequisites

For engineers who are new to MathWorks tools.

#### **Technical Computing & Data Analysis**

Skills for using the MATLAB platform to perform data analytics and collaborate on ideas across departments. Suitable for Data Analysts.

#### **DSP**

Proficiency in modeling and analyzing DSP algorithms. Suitable for DSP Developers and DSP Engineers.

#### **Implementation**

Competencies for generating and testing code from design models. The code can be used for rapid prototyping or production code deployment. Suitable for Software Engineers.

#### **Model Management & Testing**

Proficiency in working on large-scale Simulink projects and applying Model-Based-Design principles in a common workflow. Suitable for System Engineers and Test Engineers.

#### **Modeling & Simulation**

Competencies for using the Simulink platform to develop accurate, optimized, and robust system-level designs. Suitable for Control System Engineers.

#### **Self-paced Online Course**

\* All online courses can be offered in a classroom

#### The Value of an Experienced Training Expert

Our training courses are developed by MathWorks' team of 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 industryaccepted 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%.



# Expand your knowledge

