TechnoScripts

[An ISO 9001:2008 Certified Company]

GET TRAINED

BECOME EXPERT AND GET PLACED

100% JOB ORIENTED ADVANCE EMBEDDED COURSES

SCAN & CONNECT

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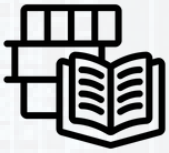
ABOUT US

TechnoScripts is an ISO 9001:2015 certified best training institute for advance courses in Embedded System. We are pioneer of Embedded System training in Pune development. Though we provide many different courses and training in embedded all aim at giving good practical knowledge to students as well help them in career

OUR FEATURES



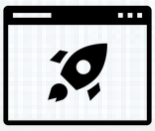
STUDY MATERIAL

ISO 9001:2015 CERTIFIED

100% PLACEMENT SUPPORT

COURSE COMPLETION CERTIFICATE

INTERVIEW PREPERATION



LIVE PROJECTS

STATE OF THE ART LABS

LEARN ONLINE / CLASSROOM

OUR COURSES

Advance Career Track | Automotive Embedded | PG Diploma in Embedded

MATLAB Simulink | MBD Training | IOT Training | Autosar Training

LIVE PROJECTS | INTERVIEW PREPERATION | MOCK INTERVIEWS

CONTACT US FOR DEMO NOW

COURSE SYLLABUS : MODEL BASED DESIGN

Module 1: Introduction to Model-Based Design

- *Understand the complete MBD workflow, including steps from system modeling, simulation, to automatic code generation.*
- *Explore key benefits of MBD, such as early error detection, system-level design integration, and reduced development time and cost.*
- *Examine real-world applications of MBD in industries like automotive (e.g., ECU design), aerospace (e.g., control systems), and robotics.*
- *Get introduced to core MBD tools like MATLAB, Simulink, and Stateflow, and learn how to install and configure them.*

Module 2: MATLAB Basics and Programming

- *This module builds a strong foundation in MATLAB, enabling students to manipulate data and write functions essential for model development.*
- *Learn to navigate the MATLAB environment, work with arrays, and understand data types and variables.*
- *Develop coding skills by writing and debugging MATLAB scripts and functions, using loops, conditionals, and modular programming practices.*
- *Understand the importance of data visualization by creating and customizing 2D and 3D plots for clear analysis and presentation.*

Module 3: Simulink Basics and Modeling (3 Weeks)

- *Explore the Simulink interface and built-in libraries, and practice building and simulating basic dynamic models.*
- *Develop structured systems by building reusable subsystems, defining simulation properties, and setting model parameters.*
- *Learn to design basic control systems and route signals efficiently, using tools like multiplexers and selectors for model clarity.*
- *Adopt modeling best practices, including naming conventions, adding comments, and organizing model hierarchy for scalability.*

Module 4: Stateflow for Logic Design

- *Understand state machine fundamentals such as states, transitions, and events, with real-world embedded system examples.*
- *Learn to create complex control logic using hierarchical and parallel state charts and decision-based flow charts.*
- *Master the integration of Stateflow with Simulink, simulating dynamic behaviors, and testing logic in real time.*

Module 5: Advanced MBD Techniques

- *Use techniques like model-in-the-loop (MIL), software-in-the-loop (SIL), and processor-in-the-loop (PIL) to validate and debug models.*
- *Generate efficient target-specific C/C++ code from Simulink models using Embedded Coder and learn to configure code generation settings.*
- *Explore optimization techniques, including working with fixed-point vs floating-point numbers, and calibrating models for real-world performance.*

Module 6: Real-Time Applications

- *Understand the principles of Hardware-in-the-Loop (HIL) simulation, and learn how to use Simulink Real-Time for testing algorithms on hardware.*
- *Learn rapid prototyping techniques by deploying models directly to embedded processors and controlling real hardware.*
- *Gain exposure to industry-standard communication protocols such as CAN, I2C, and UART for hardware interfacing.*

Module 7: Capstone Project and Career Preparation

- *Complete a capstone project that involves designing, simulating, and generating code for an embedded control system (e.g., ECU or robotic controller).*
- *Deliverables include a fully validated Simulink model and corresponding C/C++ code, showcasing complete development workflow.*
- *Get ready for industry with resume building, mock interviews, and insights into the roles and expectations for MBD engineers.*

PLACEMENTS

We provide 100% placement support to every student enrolled for Job oriented courses. We invite top companies for campus interview at our centre as well arrange the interviews for students at company premises.

OUR ALUMNIES ARE PLACED AT

KPIT, SANEPAR, Atos, TCS TATA CONSULTANCY SERVICES, HARMAN, Lenovo, UNISOUL, HCL, American Megatrends, Cummins, innovita, BOSCH, SIEMENS, SAMSUNG, Deloitte., KNORR BREMSE, Honeywell, Tech Mahindra, HITACHI, suntel, Onward TECHNOLOGIES, TATA ELXSI, AVIN SYSTEMS, RENU ELECTRONICS PVT. LTD., JOHN DEERE, infotech Solutions, KALYANI, Qualcomm, Valeo, ASUS, Whirlpool CORPORATION, FORBES MARSHALL, SEDEMAC

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