TechnoScripts

[An ISO 9001:2008 Certified Company]

GET TRAINED

BECOME EXPERT AND GET PLACED

100% JOB ORIENTED ADVANCE EMBEDDED COURSES

SCAN & CONNECT

Office No. 86-89, 5th floor, C-Wing Shreenath Plaza, Dyaneshwar Paduka Chowk, FC Road, Pune 411005

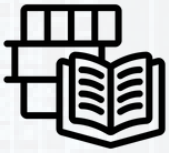
Mobile: 8605006788 | Gmail: technoscriptspune@gmail.com

www.technoscripts.in

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



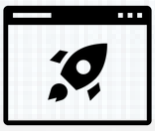
STUDY MATERIAL

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 : AUTOMOTIVE EMBEDDED TRAINING

Module 1: Introduction to Automotive Systems

- *Understand the basics of the automotive domain.*
- *Learn about the use of embedded systems in automotive applications.*
- *Explore the automotive embedded system design process.*
- *Gain knowledge of the automotive product development life cycle.*

Module 2: Sensors, Actuators, and Electronic Components

- *Study various automotive sensors and transducers.*
- *Understand automotive-grade microcontrollers and their applications.*
- *Learn about actuators, sensors, semiconductor components, integrated circuits, and SMD components.*
- *Understand the role of electric motors and driving techniques in vehicles.*

Module 3: Microcontroller and Programming

- *Learn the architecture of microcontrollers used in automotive systems.*
- *Gain hands-on experience in microcontroller programming and PWM generation.*
- *Perform sensor interfacing, including working with a Hall sensor for speed detection.*
- *Learn motor control techniques using embedded programming.*

Module 4: Communication Protocols

- *Understand the use and types of communication protocols in automotive systems.*
- *Study USART, I2C, SPI, and CAN Bus in terms of applications and structure.*
- *Learn about RS232, I2C, and SPI protocols, including pros and cons.*
- *Get introduced to automotive communication protocols, including CAN and J1939.*

Module 5: CAN Protocol Training

- *Learn the basics of CAN, including its importance, OSI model mapping, and node communication.*
- *Understand frame formats, arbitration, error types, and bit-stuffing techniques in CAN communication.*
- *Explore CAN hardware, including interfacing PIC18F458 with MCP2551, bit/baud rate calculations, and CAN engine architecture.*
- *Work on loopback testing, transmitter/receiver node setup, and building basic CAN applications using a CAN training kit.*

Module 6: Project Implementation

- *Create an automotive communication-based project using CAN.*
- *Test CAN protocol in loop-back mode.*
- *Set up transmitter and receiver nodes for data transmission and reception.*
- *Analyze communication flow and ensure proper data handling between nodes.*

Module 7: C and Embedded C Programming

- *Learn C basics: variables, loops, arrays, functions, pointers, and structures.*
- *Understand file handling, I/O methods, and memory allocation.*
- *Explore coding standards and development practices in embedded C.*

Module 8: Advanced Automotive Trends

- *Electronic Control Unit (ECU): Functionality, architecture, types, and role in vehicle performance*
- *Engine Control Module (ECM): Fuel injection, ignition timing, emission control*
- *Body Control Module (BCM): Power windows, door locks, lighting system*
- *Transmission Control Module (TCM): Gear shifting, torque management*
- *ABS Control Module: Anti-lock braking system functionality, integration with traction control*
- *Powertrain Control Module (PCM): Coordination between ECM and TCM*

Module 9: MATLAB Simulink for Automotive Applications

- *Understand the basic environment of MATLAB and Simulink.*
- *Learn to model dynamic systems and simulate automotive control applications.*
- *Design Simulink-based automotive subsystems such as speed control, motor behavior, and sensor fusion.*
- *Integrate Simulink models with embedded system hardware for testing and validation.*
- *Explore the need for simulation and understand key simulation parameters such as simulation time and step size.*
- *Get familiar with different solver types and their use in system modeling.*
- *Learn the fundamentals of Model-Based Design using Simulink.*

Module 10: Stateflow for Logic Design

- *Learn the fundamentals of Stateflow and its integration with Simulink.*
- *Model state machines and control logic using Stateflow charts.*
- *Implement event-driven and conditional logic for automotive applications.*
- *Simulate and test real-time automotive behavior using combined Stateflow-Simulink models.*
- *Understand the concept of Finite State Machines and the need for Stateflow in automotive systems.*
- *Learn to use Stateflow Truth Tables and the Chart Editor.*
- *Develop both flow-based and state-based logic systems.*
- *Explore essential Stateflow elements like functions and embedded MATLAB functions.*

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

SCAN & GET A GLIMPSE. OUR PLACED STUDENTS.