

Post Graduate Program in Embedded Software Development & Validation for EV Applications

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-----Start-----

Hi, thanks for showing interest in our Post Graduate Program on Embedded Software Development & Validation for EV Applications. It was great talking to you. Here are the details regarding the course.

Duration of the course

Full time: 6 months

Part time: 12 months

Skill Center will be available only for 6 months and post that, students need to continue the program online from home if they don't get placed or complete the program.

Complete PG Program Overview (Courses, Software/Hardwares, Job roles explained):

[PGP Embedded at SkillCenter.mp4](#)

Projects explained:

[Embedded Projects.mp4](#)

Course syllabus

1. Embedded C Essentials
2. Fundamentals of Embedded Systems
3. AVR Bare Metal Programming
4. Software Verification and Validation and System testing for Hand-Code
5. Device Drivers and Serial Communication Protocols
6. Introduction to C++ programming
7. Introduction to Model-Based Development using MATLAB and Simulink.
8. JD specific topic(s)
9. Software Verification and Validation and System Testing for Model-Based Development
10. Introduction to Physical Modeling using Simscape
11. Introduction to Hybrid electric Vehicle using MATLAB and Simulink

Projects

Embedded C Essentials

1. User interfaces for working with "Sets"
2. Finite State Machine for Aircraft Landing Gear System

Fundamentals of Embedded Systems

3. Interfacing a 16*2 LCD with 2 Arduino's using (I2C) communication protocol

4. Measuring the distance of an object using Ultrasonic sensor and smoothen the sensor data using moving average filter.

AVR Bare Metal Programming

5. DC motor control using L293 driver and print the running status of motor in the LCD screen
6. Interfacing HC-SR04 ultrasonic sensor with Atmega328p, which can be used in rear parking assistance system.

Software Verification and Validation and System Testing for Hand Code

7. Static Code Review Analysis
8. Dynamic Analysis – White box testing

Device Drivers and Serial Communication Protocols

9. Write a Driver for I2C and Use the USB Logic Analyzer to Analyze the I2C Frames
10. Write a CAN driver for STM32 Controller and analyze CAN data frames in loopback mode or Connect two STM32 hardware to verify data exchange

Introduction to C++ Programming

11. IT Inventory Management
12. Automobile maintenance System

Introduction to Model-Based Development using MATLAB and Simulink

13. Vehicle Direction Detection
14. Adaptive Cruise Control

Software Verification and Validation and System Testing for Model-Based Development

15. TFT Cluster Speedometer Display
16. Coolant Temperature Meter SWC Development

Introduction to Physical Modeling using Simscape

17. Simulation of All-Terrain Vehicle

Introduction to Hybrid Electric Vehicle using MATLAB and Simulink

18. Modelling of Electric Vehicle Using DC Motor Drive
19. Designing of Electric Powertrain

#Co-Branded Certificate with MathWorks- Students who complete Mathworks training (optional) and clear the assessment test will get the Skill-Lync certificate co-branded with MathWorks.

Softwares- 10 software tools

1. MATLAB**
2. Simulink**
3. C Programming
4. STM32CubeIDE
5. Arm Cortex M4 - STM32
6. CAN Protocol
7. C++
8. AVR ATmega328
9. Mbed Simulator

10. LRDA Tool Suite

**Licensed version of MATLAB and Simulink provided for 6 months.

Hardware

1. STM32F446RE Nucleo or STM32F334RB
2. Arduino Sensor Kit
3. Motor Driver
4. DC Motor

Demo videos

1. Embedded C Essentials-
<https://youtu.be/-bZaqU0qTHY>
2. Software Verification and Validation and System Testing for Hand Code-
https://youtu.be/5e_eqVme2fQ
3. Introduction to C++ Programming-
<https://youtu.be/fjmCzDzk29s>
4. Introduction to Model-Based Development using MATLAB and Simulink-
<https://youtu.be/3qqu-RsjVZ8>
5. Simulink for Mechanical & Electrical Engineers-
<https://youtu.be/E0clpeAR78s>
6. Introduction to Hybrid Electric Vehicle using MATLAB and Simulink-
<https://youtu.be/r77CR0psncl>
7. Fundamentals of Embedded Systems-
<https://youtu.be/DNY6TImHsk8>
8. Software Verification and Validation and System Testing for Model-Based Development-
<https://youtu.be/BE9S8PUE2p4>

EV Placement profiles

Name	Profile link	PG Program	Company	Domain
Aamir Parasara	https://skill-lync.com/profiles/aamirparasara	EV M	Ola Electric	EV
Abhijit Narayan Gawas	https://skill-lync.com/profiles/abhijit-gawas-foknp	EV M	TATA Elxsi	EV
Satish Kumar Reddy	https://skill-lync.com/profiles/moupuri-satish-kumar-reddy	EV M	HBL Power Systems Ltd	EV
Sudharshan V	https://skill-lync.com/profiles/sudharshan-shan-urbxk	EV M	OBEN EV	EV

Shaheen Shafi	https://skill-lync.com/profiles/shaheen-s-shafi-tomz2	EV M	Acsia Technologies	EV
Pritesh Gamit	https://skill-lync.com/profiles/pritesh-gamit-h38df	EV M	Expleo Engineering India Private Limited	EV
Ayush Sharma	https://skill-lync.com/profiles/ayush-sharma-3	EV M	Siemens	EV
Surendar M	https://skill-lync.com/profiles/surendar-m-0x8i6	EV M	Sona Comstar	EV
Shankar moorthy	https://skill-lync.com/profiles/shankar-moorthy-4vwma	EV M	HCL	EV
K LEELA	https://skill-lync.com/profiles/leela-ram-65gjc	EV M	Hyundai Mobis	EV
Neha Chinawalka	https://skill-lync.com/profiles/nehadhanu-mir5f	EV M	Hinduja Tech	EV
Akshaya rachel	https://skill-lync.com/profiles/akshaya-rachel	PG EV	Tech Mahindra	EV
Hrishikesh Madhukar Patil	https://skill-lync.com/profiles/hrishikesh-madhukar-patil-9nv2i	EV M	Renault Nissan	EV
Yenumala Srinivas	https://skill-lync.com/profiles/yenumala-srinivas-wn7mb	EV M	Grinntech	EV
K P Savyasach	https://skill-lync.com/profiles/k-p-savyasach-geufb	PG EV	Mahindra Electric	EV
Rushikesh Pralhadsing Rajput	https://skill-lync.com/profiles/rajput-rushikesh-pralhadsing-y6o5v	PG EV	KPIT	EV
Pranit Thul	https://skill-lync.com/profiles/pranit-thool-lg2sa	PG EV	TATA Technologies	EV
Parvez Khan	https://skill-lync.com/profiles/parveez-khan	EV M	Marielli	EV
Winnie Raghu	https://skill-lync.com/profiles/winnie-raghu	EV M	L&T Technology Services	EV
Suraksha Ramesh	https://skill-lync.com/profiles/suraksha-ramesh-xv321	PG EV	Navbharat Edison Motors Pvt Ltd	EV

Job Opportunities in Embedded domain explained:

[Job Opportunities Embedded.mp4](#)

Success stories

Check out the Placements of our customers at [Skill Lync Success Stories.pdf](#) and also hear what they say about our courses at <http://bit.ly/skill-lync-google-reviews>

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[Job Leading Online Courses with 24x7 Support](#)

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For more information, visit www.skill-lync.com

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