



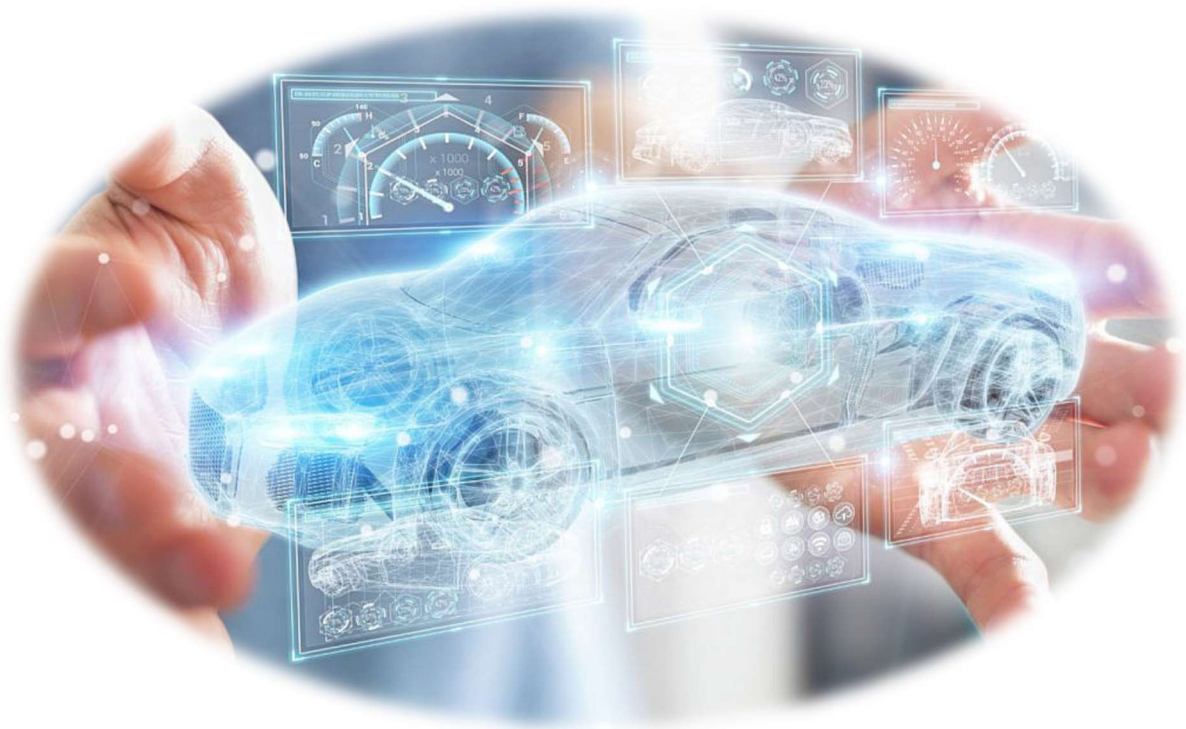
R.M.D. ENGINEERING COLLEGE

(An Autonomous Institution)
RSM NAGAR, KAVARAIPETTAI



CENTER OF EXCELLENCE

AUTOMOTIVE ELECTRONICS



In coordination with
KPIT TECHNOLOGIES LIMITED

R.M.D. Engineering College has established the Centre of Excellence (CoE) in Automotive Electronics (AE) in association with KPIT Technologies Limited, Pune with a commitment to create and disseminate knowledge through a range of high-quality academic programs in a student-centric learning environment leading to improve employability in the field of Automotive Electronics. It dawns new ground in the Automotive Electronics training sector for ECE, EEE and EIE students.



- ❖ Signed MoU with KPIT Technologies Limited, Pune as Recruitment Partner on 24.08.2016 and renewed again on 27.10.2021.



- ❖ Signed MoU with BOSCH Limited as Knowledge Partner on 07.02.2020

Joint Certification Centre (JCC) in association with BOSCH Limited is acting as the bridge to address the technological gap and focus on various technical training programs for BOSCH network. BOSCH has trained our faculty members to impart effectual teaching learning and training in automobile domain through Training the Trainer model.

THE ACTIVITIES OF THE CENTRE ARE FOCUSED ON:

- To provide focused skill training programs to students in line with the industry requirement. The main aim is to provide training on real-time systems of automotive which help students to meet the auto industry expectations like Auto electrical systems, OBD (on board diagnostics) simulator, Safety systems, Engine control and Driver assistance.
- The CoE is formed with advisory committee members from various leading industries in the automotive field. It is focusing on providing research solutions to the automotive industries through focused R&D in association with the curious students and faculty members from R.M.D. Engineering College.
- Self - Learning through e-learning platforms: Coursera, Udemy, NPTEL, edX is enforced to learn about the special advanced features in the vehicle including electric vehicle, adaptive cruise control, park assistance, lane keep assistance, pedestrian detection and traffic-sign recognition.
- Creation of Job-Ready professionally skilled manpower for consumption at the international level.
- To bring new products/solutions from the budding entrepreneurs with the guidance of industry experts. It helps automotive aspirants to build a successful career path to maintain a competitive edge in the automotive industry.
- Students are encouraged to participate in Corporate Competitions and Hackathons and are motivated to take up various certifications in automotive domain.

FACULTY SPOC / COORDINATORS

1. Mr.Kumaravel V (SPoC), Assistant Professor, ECE
2. Dr .N.Vini Antony Grace, Associate Professor, ECE

CoE ACTIVITIES

Academic Year 2023–2024				
S. No.	Training Programme	Date	Training provider	Students/Faculty
1.	Professional Skills Development Orientation session	7.11.2023	Ms.Arya Komal and Team, KPIT Technologies Limited.	Dr,N Vini Antony Grace, Associate Professor , ECE and Mrs.S.Swetha Assistant Professor , CSE
2.	Autonomous Cars and Sensors used in Autonomous Cars.	3.11.2023	Mr.Dhanasekar Chinnappan, Hardware Team Leader and Hardware expert, Valeo India Pvt Ltd.	II year and III year, Automotive Electronics students.
3.	Bosch JCC training on MTS module.	11.10.2023, 12.10.2023, 13.10.2023, 21.10.2023	Mr. Kiran G Nair and Mr. Prathab, Bosch Training Centre, Bangalore.	II year and III year students
4.	Orientation Program	22.08.2023	Kumaravel V , Assistant Professor, ECE, AE SPoC	II year (2022-2026) Batch students
5.	KPIT meeting with HoDs and Professors regarding subject to be included in autonomous curriculum.	08.08.2023	1.Mr.Ranganath Madaboosi – Business leader. 2.Mr Raghav Ankur Senior Principal Educator. 3.Kalyan K Arigela , Lead Campus Hiring.	HoDs and Professors of ECE, EEE, CSE, IT and EIE
6.	KPIT Pre-Placement Talk.	08.08.2023	Mr.Raghav Ankur, Senior Principal Educator.	Batch – (2020 - 2024) ECE Placement Eligible Students.
7.	Bosch Faculty Training on fuel Injection system and vehicle diagnosis.	12.06.2023 to 17.06.2023	Mr.Aakash Mohan and Mr.Prathab, Bosch Training Centre, Bangalore.	Dr,N Vini Antony Grace, Associate Professor , ECE
Academic Year 2022–2023				
S. No.	Training Programme	Date	Training provider	Students/Faculty
1.	Basics of engine and related functions	08.04.2023	Ms.Aishwaryah Ilankumaran, Software Engineer , Mercedes Benz	III year (2020 -2024 Batch) AE cum VLSI Batch adopted Students
2.	Orientation program about CoE	01.04.2023	Mr.Kumaravel V, Asst Professor , ECE, SPoC, Automotive Electronics	II – Year (2021-2025) Batch students

3.	Automotive Embedded Software Industry trends and expectation	27.03.2023	Mr.Raghav Ankur, Senior Lead , Learning and Development , KPIT , Bangalore	III year (2020 -2024 Batch) AE cum VLSI Batch adopted Students
4.	The expectation of the Organization from Freshers: Journey from campus to corporate	16.02.2023	Mr. Ashish Bhalla, Associate Director-HR, HCL Tech, Noida.	III year (2020 -2024 Batch) AE cum VLSI Batch adopted Students
5.	KPIT NOVA Trainer Connect schedule “Overview with OOPS with C++” (Online)	15.02.2023	Mr.Tushar kale, KPIT NOVA,	III Year (2020 -2024 Batch) KPIT NOVA Registered Students
6.	KPIT NOVA Trainer Connect schedule “Overview with Model Based Design” (Online)	16.02.2023	Mr.Pawankumar Fakatkar, KPIT NOVA.	III Year (2020 -2024 Batch) KPIT NOVA Registered Students
7.	KPIT NOVA Trainer Connect schedule “Overview with Embedded Systems & C” (Online)	17.02.2023	Mr.Raghav Ankur, KPIT NOVA.	III Year (2020 -2024 Batch) KPIT NOVA Registered Students
8.	JCC Training “Automotive Electrical”	22.11.2022 & 23.11.2022	Mr.Akash Mohan, Trainer, BOSCH Limited.	III Year (2020 -2024 Batch) Registered Students
9.	JCC Training “Vehicle Diagnostics Basics (OBD) and System Diagnostics”	24.11.2022 & 25.11.2022	Mr.Akash Mohan, Trainer, BOSCH Limited.	III Year (2020 -2024 Batch) Registered Students
10.	JCC Training “Measurement & Testing of Sensors and Actuators”	26.11.2022 & 28.11.2022	Mr.Akash Mohan, Trainer, BOSCH Limited.	III Year (2020 -2024 Batch) Registered Students
11.	Introduction about KPIT NOVA Edition 2 (Online)	20.10.2022	M/s KPIT Technologies Pvt, Limited ,Pune.	III Year (2020 -2024 Batch) Students

12.	KPIT Preplacement Talk	15.09.2022	Mr.Raghav Ankur and Ms.Priya Chavan, KPIT Technologies Pvt, Limited	KPIT NOVA Registered and Placement Eligible students
13.	KPIT NOVA Faculty Connect Program	20.01.2023	Ms.Arya Komal, KPIT NOVA Team	Mrs. S.Swetha Assistant Professor , CSE
14.	Automotive Electrical and Electronics Summit Theme : “Automotive PACE trends 2023”	08.12.2022	Confederation of Indian Industry	Mr.Kumaravel V , Assistant Professor , ECE

Academic Year 2021–2022

S. No.	Training Programme	Date	Training provider	Students/Faculty
1.	Four days of training on “Vehicle Diagnostics Basics (obd) and Measurement & Testing of Sensors and Actuators”	02.06.2021 to 05.06.2021	Mr. Kiran.G.Nair, Regional Trainer-South BOSCH LIMITED, Bangalore	III Year Students[AE CoE + Non CoE Students]
2.	Two days of introductory training on MATLAB and Simulink “Control Design & Modeling And Simulation Of Hybrid Electric Vehicles”	11.06.2021 & 12.06.2021	Designtech Systems Pvt Ltd	II & III AE CoE Students
3.	Mock Interview By Alumni Students	4.9.2021	13 Alumni Students	IV AE CoE Students
4.	Six Days of Training on Vehicle Diagnostics Basics (OBD) and Measurement and Testing of Sensors and Actuators & Automotive Electrical Systems	08.11.2021 TO 13.11.2021	JCC of R.M.K. Group & BOSCH	III AE CoE Students
5.	Overview of Automotive Powertrain and Vehicle Dynamics	16.11.2021	Mr.Sankar Ananda Krishnan.V Product Expert Driveline Systems ZF Wabco India Ltd,Chennai	III AE CoE Students

6.	Automotive Power Train Topologies	18.12.2021	Mr.Barath Murugan, Software Engineer, Robert Bosch Engineering and Business Solutions,Coimbatore	III AE CoE Students
7.	Six Days of Training on Vehicle Diagnostics Basics (OBD) and Measurement and Testing of Sensors and Actuators & Automotive Electrical Systems	2.3.2022 To 8.3.2022	Mr.Kiran.G.Nair & Mr.Aakash Mohanan, BOSCH Limited	RMK Group Faculty-31
8.	Advancements and importance of Automotive Electronics	18.3.2022	Ms.Madhumitha Mohan, Software Developer, KPIT Technologies Private Limited, Bangalore	II and III Year AE CoE Students (2024 &2023)

Academic Year 2020–2021

S. No.	Training Programme	Date	Training provider	Students/Faculty
1.	Automotive Electronics CoE Roadshow	05.03.2021	CoE Coordinator	II year Students
2.	Guest Lecture on “World Of Automotive Technologies”	15.05.2021	Mr. KARTHIK KRISHNAN Deputy Manager Maruti Suzuki India Limited,Chennai.	II & III AE CoE Students
3.	Special Guest Lecture on “Automotive Braking System	17.05.2021	Mr. D.VISHNUMOORTHY Associate Software Engineer Robert Bosch Engineering And Business Solutions Private (RBEI) Limited, Coimbatore	II & III AE CoE Students
4.	Special Quiz Competition on “Basics Of Automotives	18.05.2021	CoE-AE Coordinators with KAHOOT APP	II AE CoE Students
5.	CoE Training on Impact of Electronics in Automotive Industry	21.05.2021	Mr.S.Karthick, Founder Wing wizard Industry Skills Development Centre	III AE CoE Students
6.	Overview of In-Vehicle Networking	22.05.2021	Mr.N.Shyam, Software Developer Mindtree	III AE CoE Students

7.	C Programming Assessment through Hacker Earth	24/05/2021	Mr.Sudharsan.M, Lead-RPA Guardian Life Insurance Mr.Rajesh Sathyakumar Pursuing MS in Computer Science Arizona State University	III AE CoE Students
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CoE STUDENTS PLACEMENT DETAILS

Department	Batch	Total no of Students	No of Students Placed
Electronics and Communication Engineering	2019 -2023	12	12
	2018 -2022	17	16
	2017 -2021	15	14
Electrical and Electronics Engineering	2019 -2023	6	6
	2018 -2022	7	7
	2017 -2021	10	10
Electronics and Instrumentation Engineering	2018 -2022	1	1
	2017 -2021	3	3

ACTIVITIES



Guest Lecture on “Autonomous Cars and Sensors used in Autonomous Cars” by Mr. Dhanasekar Chinnappan, Hardware Team Leader and Hardware expert, Valeo India Pvt Ltd. (3.11.2023)



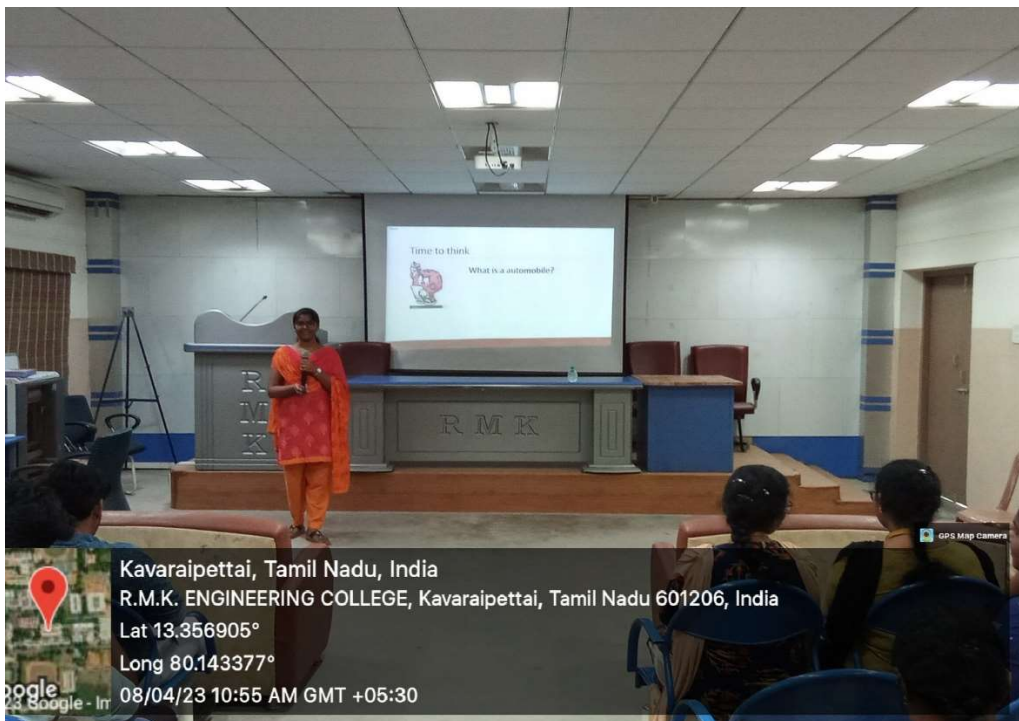
Bosch JCC training on MTS module (12.10.2023)



Orientation Program to II year students (22.08.2023)



Bosch Faculty Training on fuel Injection system and vehicle diagnosis (12.06.2023 to 17.06.2023)



Guest Lecture on “Basics of engine and related functions” by Ms.Aishwaryah Iankumaran, Software Engineer , Mercedes Benz (08.04.2023)



**Guest Lecture on “Automotive Embedded Software Industry trends and expectation”,
Mr.Raghav Ankur, Senior Lead , Learning and Development , KPIT , Bangalore
(27.03.2023)**




**JCC Training “Vehicle Diagnostics Basics (OBD) and System Diagnostics”
(24.11.2022 & 24.11.2022)**

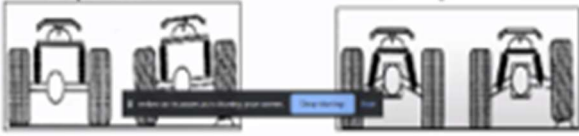
Passenger comfort

Suspension system

- Provides smooth ride and prevents road shocks
- Prevents tilting down accelerating of heavily loaded or applying sudden brakes.



Dependent **Independent**



REC Barath Murugan is presenting

Madhumitha Mohan

Guest Lecture on “Advancements and importance of Automotive Electronics”, by Ms.Madhumitha Mohan, Software Developer, KPIT Technologies Private Limited, Bangalore(18.3.2022)


Electronic engine control unit
For optimal engine operation

The electronic engine control unit (ECU) is the central controller and heart of the engine management system. It controls the fuel supply, air management, fuel injection and ignition. Due to the scalability of its performance, the control unit is also able to control the exhaust system as well as to integrate transmission and vehicle functions. The ECU manages all types of powertrain and topologies such as Gasoline, Diesel, CNG, Ethanol and also Hybrid and Fuel Cell system.

powerful
high performance micro controller and 32bit functionality to support future powertrain requirements

flexible
scalable portfolio of hardware and software for various markets and vehicle segments, like passenger car, commercial and off-road vehicles

future oriented
The 32bit architecture integrates model based as well as self learning functions and can be simplified with advanced methodologies to enable efficient data calibration.



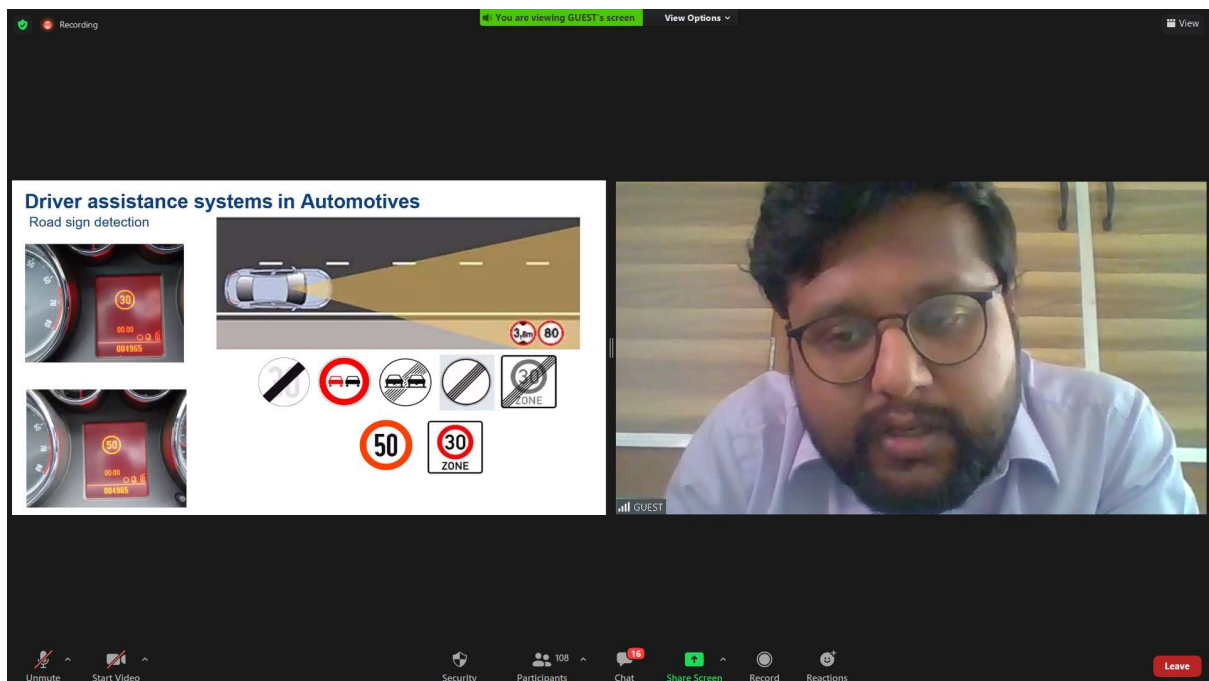
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BOSCH

Guest Lecture on “Automotive Power Train Topologies”, by Mr.Barath Murugan, Software Engineer, Robert Bosch Engineering and Business Solutions,Coimbatore (18.12.2021)



Guest Lecture on “Impact of Electronics in Automotive Industry”, by Mr.S.Karthick, Founder Wing wizard Industry Skills Development Centre (21.05.2021)



Guest Lecture on “WORLD OF AUTOMOTIVE TECHNOLOGIES” ,by Mr. KARTHIK KRISHNAN, Deputy Manager, Maruti Suzuki India Limited,Chennai.(15.05.2021)