



## RVCE - Mercedes Benz Centre for Automotive Mechatronics

### ADVANCED DIPLOMA IN AUTOMOTIVE MECHATRONICS (A Programme in Collaboration with Mercedes-Benz India Pvt. Ltd.)

RV College of Engineering® (RVCE) established in 1963 is one of the earliest self-financing engineering colleges in the country. The institution is run by Rashtreeya Sikshana Samithi Trust (RSST), a not for profit Trust. RVCE is an Autonomous college. Currently, the institution offers 13 Bachelors and 16 Master Programs. All the departments have Research Centres, affiliated to Visvesvaraya Technological University (VTU), Belagavi. The institution has set itself a Vision “Leadership in Quality Technical Education, Interdisciplinary Research & Innovation, With a Focus on Sustainable and Inclusive Technology”. Recent awards and achievements include - Ranked 77 in the Country by National Institutional Ranking Framework (NIRF)–2020-21, “Engineering College of the Year-2019” by the Higher Education Review Magazine, Ranked 7 among the top 10 of 100 Pvt. Engg. Colleges in the Country by Education World Magazine. Twelve UG programs and eligible M.Tech & MCA programs have been accredited by NBA multiple times. The institution has to its credit over 1400 National and International Journal publications, filed over 40 patents, 39 published patents, two patent granted, completed sponsored research and consultancy projects worth Rs. 30.0 crores in the last few years. The Institution has established Centres of Excellence in Macro electronics, Internet of Things, Smart Antenna Systems, Computational Genomics and e-Mobility. The College currently has student strength more than 5500, faculty strength over 360, technical & administrative Staff 225 and Research Scholars 200.

#### **About Mercedes Benz:**

Mercedes-Benz is a leader in luxury car market with over 128 years of cutting edge innovation in the areas of Technology, Safety, Reliability, Comfort and Environment. The company owns world class brands such as Mercedes-Benz, AMG, FUSO, Smart, Maybach, Freightliner and Western Star. Established in 1994, Mercedes Benz India Private Ltd. set up a world class production facility in 2009 with an independent assembly facility for passenger cars. The facility is among the fastest green-field operations ever to be created and is rated one amongst the top most plants of Mercedes-Benz, globally. Mercedes-Benz India's strong focus on its four pillars of

Products, Network, Cost of Ownership and Brand experiences has led the company's growth story with a total of 94 outlets located in 57 Indian cities, making the densest brand network in the luxury car segment.

The German car manufacturer under the initiative of Indo-German chamber of commerce introduces '*Advanced Diploma in Automotive Mechatronics*' in association with RV College of Engineering®, Bengaluru. The prime reason for introducing the course is the scarcity of skilled automobile technicians considering modern cars with high end technology. Mercedes is involved in planning the course syllabus, development of modern electronics lab, car bay, aggregate training rooms equipped with Mercedes-Benz training cars, engines, transmissions, training of faculty and supply of tools & equipment to train students in-line with the rapidly growing luxury automotive sector not only in India but across the globe. The aim of the course is to produce qualified, industry-ready professionals to be recruited at dealerships of MBILAs well as other brands of automobiles, automotive manufacturing plants and also at automotive R&D centers.

#### **Relevance of Advanced Diploma in Automotive Mechatronics:**

Automobile Industry in India is growing rapidly and is also maturing at a faster pace not only in terms of size and model variants available but also in terms of technological advancements in new cars. Across all vehicle segments, the automotive technology is becoming more and more sophisticated with stringent regulations and increased customer awareness. To cater effectively to after sales service requirements of these technologically advanced vehicles, well qualified and skilled technical manpower is needed by all brands at dealerships as well as in the automobile industry all over the country.

#### **Features of Industry-Academia collaboration to bring the best of both worlds:**

- German technology meets Indian talents
- First ADAM institution to facilitate training on High Voltage modeling & simulation in association with Mercedes-Benz R&D, India
- Intensive training
- State of the art facility provided by Mercedes Benz
- Hands-on on X-entry portal system
- Practical experiments on high end Mercedes Benz car
- Extensively trained faculty by Mercedes Benz India Pvt Ltd.
- Regular interaction with experts from Mercedes Benz to keep abreast of latest developments in industry

**Course Content:** The course content and methodology is derived in collaboration with Mercedes-Benz India to suit the needs of the advances in Automotive Mechatronics. The course consists of following five modules:

- i. **Mechanical Module:** Engine - Modern engines and their functions, Transmission, Chassis systems, Maintenance and Servicing of Modern Vehicles, Introduction to Workshop Information System (WIS), PDI & servicing - Preparation of work plan using maintenance checklist. Quality services.

- ii. **Electronics Module:** Basic Electrics, Wiring Diagram - symbols and designation of electrical components, sockets & pin diagrams, Reading of wiring diagram. Basic Electronics, Principle & applications of sensors, Digital Electronics, Basics of CAN bus, networking of control units using CAN bus, Location of CAN voltage distributor, Interior & Exterior CAN.
- iii. **Advanced Automotive Systems:** Vehicle Component Study; Vehicle Management System: Functions of Engine management & Emission control management - i.e. Advanced CDI, MESFI, Catalytic converter etc., ESP, ABS, BAS, ASR, Parktronic, SRS, Auto transmission electronic control. Telematics (Basic), MOST, D2B, Auto air-conditioning etc.
- iv. **Electric Vehicle Technology:** Systems module, E Learnings, Awareness to High Voltage Systems, Safety - Do's and Don'ts, High Voltage measurements, practicals on High Voltage car, simulation and modelling on HV test bench.
- v. **Soft Skill Development:** Communication skills-Verbal Communication, Body language, Presentation skill using modern aids, written communication - Business letter writing, Technical Report writing, etc.
- vi. **Workshop Attachment Module:** One week training at dealer's workshop to perform a maintenance service activity and practice the various process of vehicle maintenance.

**Faculty** : Faculty /trainers from RVCE, are Doctorates/Postgraduates in Engineering with rich experience and are trained on Automotive Mechatronics at Mercedes-Benz plant in Chakan, Pune

**Duration** : One year (5 modules)

**Fees** : Rs. 1,25,000/- plus GST @ 18 % (Rs. One lakh forty seven thousand five hundred only) for the entire course to be paid at the time of Admission

**Intake** : 20 students

**Eligibility** : Diploma or Engineering Degree in Mechanical Engineering /Automobile Engineering /Electronics or Electrical Engineering /Instrumentation Engineering and allied branches

**Admission** : Admissions through entrance Test only. The test is based on basic automotive, basic physics, analytical reasoning, and numerical ability, English, Engineering Drawing and Skill Test

**Certification** : On successful completion of the course, students will be awarded globally valid 'Advanced Diploma in Automotive Mechatronics' by Mercedes Benz Academy, Pune

**Industry Experts** : During the course, the students will be exposed to Industrial visits across automotive sectors to enhance their knowledge in advances in automotive technologies and acquire practical skills. The students will also be educated through invited talks, webinars from automotive sectors during their course of study.

| Table1: Placement Statistics for last 04 years (2018-19, 2019-20, 2020-21, 2021-22) |   |                 |
|---|---|-----------------|
| SL No   | Company Name                                    | No. of students |
| 1   | Mercedes Benz Dealerships                       | 07              |
| 2   | Mercedes Benz Research and Development          | 04              |
| 3   | OLA Electric                                    | 05              |
| 4   | Robert Bosch                                    | 05              |
| 5   | Volvo Trucks Research and Development           | 02              |
| 6   | E-Vehicle Start-up                              | 02              |
| 7   | Engine CAL                                      | 01              |
| 8   | LYKAN Automotive                                | 01              |
| 9   | Amtronics                                       | 01              |
| 10  | Duroshox  | 01              |
| 11  | Entrepreneurs                                   | 02              |
| 12  | Suprajith Engineering, Bengaluru                | 01              |
| 13  | Deevia Software (Autonomous Vehicle company)    | 01              |
| 14  | WIPRO-IISc AV Project, Research Scholar         | 01              |
| 15  | Higher studies – MS in Automotive Engg., Sweden | 01              |
| 16  | Ampere Greaves                                  | 02              |
| 17  | Sponsored Students                              | 10              |

#### Admission Process for ADAM 2024-25 Batch:

Application form for entrance examination to be downloaded from website: [www.rvce.edu.in](http://www.rvce.edu.in) The filled - in application form along with the attested photocopies of mark sheets and certificates of Diploma/Degree in Engineering and a DD of Rs.590/- (Rs.500/- + GST @18% Rs.90/-) favouring 'The Principal, RV College of Engineering@', Bengaluru to be sent to "The Principal, RV College of Engineering@, 8<sup>th</sup> Mile, Mysuru Road, Bengaluru-560059". Short listed candidates have to produce testimonials along with Demand Draft in favour of Principal, RV College of Engineering, Bengaluru.

#### For more details contact:

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