



# GOVERNMENT POLYTECHNIC, AURANGABAD.

(An Autonomous Institute of Government of Maharashtra )

Osmanpura, Station Road, Aurangabad-431 005

Website: [www.gpabad.ac.in](http://www.gpabad.ac.in) Email: [gpaur@rediffmail.com](mailto:gpaur@rediffmail.com)

Phone: 0240-2334724 / 2360781 Fax: 0240-2353644



Mercedes-Benz  
The best or nothing.

## ADVANCED DIPLOMA IN AUTOMOTIVE MECHATRONICS

(A Course Developed in Collaboration with Mercedes-Benz India Pvt. Ltd.)

Government Polytechnic, Aurangabad is a leading Polytechnic of Technical Education Department, Government of Maharashtra. This institute is accredited by NBA with Excellent Grades and is also elected under World Bank TEQIP project. Academic Autonomy has been conferred on this Institute since 1994. The institute had been awarded Best Polytechnic award for the year 1996-97, by Government of Maharashtra for consistent excellent performance in Technical Education. The Institute also has been conferred by ISTE Narsee Monjee Award for Best Polytechnic having Best Overall Performance in Maharashtra State in the year 2006. The institute is located in Industrial Zone. Majority of these industries are related to Automobile, Information Technology and Electronics & Telecommunication sectors.

### About Mercedes-Benz India

Mercedes-Benz India, which celebrated its 25<sup>th</sup> anniversary in India in 2019, pioneered the luxury car market in the country. Set up in 2009, Mercedes-Benz India's world-class production facility is spread over 100 acres in Chakan near Pune. Since June 2015, Mercedes-Benz India has also commenced production from its new expanded production facility located on the same premises. Mercedes-Benz India is part of Mercedes-Benz's Global Production Network and plays an important role in the CKD/MVP production network in Brazil, Indonesia, Malaysia, Thailand, and Vietnam. At these locations, Mercedes-Benz produces vehicles in various extension levels for domestic markets. The production facility carries an investment of more than INR 2,200 crores and has the largest installed production capacity for any luxury carmaker in India. Mercedes-Benz India also has the largest network spread amongst any luxury carmaker, with a presence in 48 Indian cities with close to 100 outlets.

Through the exclusive AMG Performance Centers located in six cities including New Delhi, Mumbai, Hyderabad, Bangalore, Kochi, and Pune, the AMG performance sub-brand of Mercedes-Benz also boasts of a strong retail network presence in the country. October 2019 also marked the introduction of Mercedes me connect and e-Commerce platform, the new digital initiatives for the best customers experience in India.

Mercedes-Benz India now boasts of the entire portfolio having 'connected cars'. Mercedes-Benz India product portfolio comprises the locally produced Mercedes Maybach S 560, S-Class, E-Class Long Wheelbase, CLA, C-Class, and the GLA, GLC, GLC Coupé, long-wheelbase GLE, G350d, and GLS luxury SUVs. Completely Built imported cars portfolio includes the V-Class, CLS, C-Class Cabriolet, the G 350d, the EQC, and the exciting AMG range. 'Restless for Tomorrow' is Mercedes-Benz India's mantra for 2020.

Today's Indians are increasingly redefining themselves. This generation is not defined by age; restlessness is a state of mind, not a date of birth. They are restless and so is our brand. Mercedes-Benz India also took a firm step towards Electromobility with the launch of the 'EQ' brand in India in January 2020. Mercedes-Benz launched the AMG GT 63S 4MATIC+ 4 Door Coupé and the V-Class Marco Polo and also unveiled the New Mercedes-AMG A 35 4MATIC and the New GLA SUV at the 15<sup>th</sup> Auto Expo. The GLC Coupé was launched in March, which was also Mercedes-Benz India's 10<sup>th</sup> CKD product in India. Mercedes-AMG also strengthened its portfolio in India with the launch of the AMG C 63 Coupé and the AMG GT R in May-2020. Mercedes-Benz strengthened its SUV portfolio with the launch of 2 new variants of the GLE, 3<sup>rd</sup> generation new GLS, and the Mercedes-AMG GLE 53 4MATIC+ Coupé.

Government Polytechnic, Aurangabad and Mercedes-Benz India Private Ltd. had jointly introduced the Advanced Diploma in Automotive Mechatronics course in 2009. The collaborative course will enable students to be trained as per the highest standards of modern automotive technology and thereby will bring added synergies between technological innovations and market demands for skilled personnel.

### **Why Automotive Mechatronics course?**

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, good qualified and well versed technical human resources will be required by all brands at dealerships as well as in the automobile industry all over the country. Automotive Mechatronics course intends to address these requirements through this course.

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

**1. Mechanical Module:** Engine - various modern engines and its functions, Transmissions, Chassis systems, Maintenance & Servicing of Modern Vehicle, Introduction to Workshop Information System (WIS), PDI & servicing - Preparation of work plan using maintenance checklist, Quality services, etc.

**2. Electronics Module:** Basic Electrics, Wiring Diagram - symbols & 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.

**3. Advanced Automotive Systems:** Vehicle Component Study; Different 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, Telemetric (Basic), MOST, D2B, Auto air-conditioning etc.

**4. Soft Skill Development:** Communication skills- Verbal Communication, Body language, Presentation skill using modern aids, written communication - Business letter writing, Technical Report writing, etc.

**5. Workshop Attachment Module:** One month training at various dealer's workshop to perform a maintenance service activity and practice the various process of vehicle maintenance.

**Faculty:** Faculties / trainers from Government Polytechnic are Post Graduates in Engineering and having vast teaching experience. They have been trained on advanced automotive systems at Mercedes-Benz plant in Chakan, Pune under German trainer.

**Course Duration:** 1 year (5 modules)

**Eligibility:** Diploma OR Degree in Engineering. (Mechanical, Automobile, Electrical, Electronics, Electronics & Telecommunication, Instrumentation)

**Course Fees:** Tuition fees Rs 1,00,000/- should be paid before the admission confirmation.

**\*NOTE:-** 1. The admission will be confirmed only after full payment of tuition fees i.e. Rs. 1,00,000/-

2. Admission in to the hostel will be confirmed only after full payment of hostel fees i.e. Rs. 21000/- (Hostel will be available as per availability)

**Scholarships:** "MB India will provide scholarship to deserving students of ADAM"

**Course Intake:** 22 students (5 seats are reserved for Mercedes-Benz dealer sponsored candidates).

**Hostel Facility:** Limited hostel facility is available in institute campus. Lodging charge per annum is Rs.21000/- (Hostel will be available as per availability)

**Eligibility Criteria:** A candidate who has passed AICTE& MSBTE approved Diploma or Degree in Mechanical/Automobile/Electronics/Instrumentation/Electrical Engineering branches is eligible for admission to this course.

- **NOTE :-** The candidate`s passed from Diploma or Degree in Mechanical/Automobile/Electronics/Instrumentation/Electrical Engineering allowed to appear for the exam and give the test. If the candidate is selected their admission will be confirmed only if they successfully complete their diploma/ degree ( i.e. when they have authentic mark sheet) and submit the document before the date of commencement of course.

**Certification:** After successful completion of the course, students will be given Certificate of “**Advanced Diploma in Automotive Mechatronics**”.

**It shall be signed by Principal, Govt. Polytechnic, Aurangabad and officer from Mercedes Benz India Pvt. Ltd.**

**Admission Process:** Admission to the course is through Entrance test, Practical Test and personal interview

**Syllabus for written Entrance Test:- (Total 125 Marks)**

(Questions for all following syllabus based on Multiple Choice Questions (MCQ) only.)

**Basic Automotive :- (25 Marks)**

Working and constructional features of C.I. and S.I. engines, Transmission, Braking system, Steering and suspension system, Wheels& Tyres.

**Basic Physics :- (25 Marks)**

Force, Velocity & acceleration, Time & Work, scalar & vector quantity, Friction, rating of battery, Electrical circuit, Electric resistance, Inductance, Capacitance & their units, Mutual inductance, Ohms Law, Electric work, power & Energy, connection of Ammeter & Voltmeter, Semiconductor, Welding Process& alloys

**Analytical reasoning (25 Marks), Numerical ability (25 Marks), Aptitude Test (25 Marks)**

**Syllabus for Practical Test :- (Total 50 Marks)**

1. Isometric, orthographic projections & its symbols,(10 Marks)
2. Measurements using vernier caliper(10 Marks)
3. Measurements using Multimeter(10 Marks)
4. Skill test. (20 Marks)

Application form for entrance examination has to be **downloaded** from website: [www.gpabad.ac.in](http://www.gpabad.ac.in) The Print out of downloaded filled- in application form along with the attested photocopies of mark sheets and certificates of Diploma/Degree in Engineering and DD of **Rs.1000/-** (non-refundable entrance examination fees) favoring “**Principal, Government Polytechnic, Aurangabad**” Payable at Aurangabad should be sent to the “Principal, Government Polytechnic, Osmanpura, Peer bazar Station Road, Aurangabad 431001” on or before the last date of submission of form as per Admission schedule.

No separate letter/ hall ticket will be issued to the candidates in this regard. The candidates are required to bring with them any one from PAN Card/ Driving License/ Aadhaar Card or any other valid ID proof for entrance test along with the Original essential educational documents. Candidates must come along with mask and sanitizer.

- If any postal difficulty for sending the DD of Rs. 1000/- & required educational documents along with form the candidate may send the scanned copy of the same along with the form on give mail (adamgpaur@gmail.com) & whatsapp number (9850018399, 9404368880). But candidate in such a case candidate must produce original DD of Rs. 1000/- & required educational documents along with form at the time of Entrance Test.
- Interested & eligible candidates please fill up the required data in the Google link <https://forms.gle/nESnx3eLpeQ7yYTz5> so that it is convenient to them the updates if any. Those candidates already fill up their information in given link don't fill up again.

**The institute will follow all the rules and guideline given by government related to global pandemic of Covid19**

**Entrance examination test center: Department of Computer, Conference hall Government Polytechnic, Osmanpura, Peer bazar, Station Road, Aurangabad.**

**Practical, Skill test & Interview center: Department of Advanced Diploma in Automotive Mechatronics center in front of Government Polytechnic & near the Aeronautical & Yamaha Training center, Osmanpura, Peer bazar, Station Road, Aurangabad.**

**NOTE: The candidates should reach for Entrance test least 1 Hr before the commencement of the test exam. No separate letter/Hall ticket will be issued in this regard.**

## **ADMISSION SCHEDULE**

Advertisement in News Papers : 10.12.2020 to 19.12.2020 in different News Papers.

Last date for receipt of filled admission form : 21.12.2020 up to 11:00 am

Entrance Test & Practical Test on : 21.12.2020 - 12:00 afternoon

If some candidates Practical Test remain than it will be conducted on : 22.12.2020

Display of merit list : 28.12.2020 - 04:00 pm

Reporting for confirmation of admission : 02.01.2021 up to 2:00 pm

Waiting list will be operated : 02.01.2021 at 4:00 pm

**Commencement of course** : This date will be decided as per Govt.

guidelines, rules & regulation. The same will be communicated to all the candidates who has confirmed the admission through mail & their Whatsapp number. At the time of confirming the admission the selected candidate should send scanned copy of their tuition fees & Hostel fees DD on given mail & Whatsapp number. At the time of actual commencement date of course they should produce their original educational documents & original DD of tuition fees & Hostel fees for verification. The candidate willing to take admission should pay full tuition fees as mentioned above in order to confirm the admission. The tuition fee Rs. 1,00,000/- (Rs. One Lac only) should be paid through Demand Draft favoring **“Principal, Government Polytechnic, Aurangabad.”**  
**Payable at Aurangabad.**

Candidates willing to avail hostel facilities will be required to pay Rs 21,000/- as hostel lodging charges through DD drawn in favor of **“The Principal, Government Polytechnic, Aurangabad.”**  
**Payable at Aurangabad.(Hostel will be available as per availability)**

**Final admission confirmation will be give once the educational documents are verified once he /she reports to the ADAM Center Government Polytechnic Aurangabad.**

***For details contact:***

**Contact Persons – Coordinator and trainer of ADAM G. P. Aurangabad.**

**Prof. M.L. Bhagwat–9850018399, 9404368880.**