



GOVERNMENT POLYTECHNIC, AURANGABAD

(An Autonomous Institute of Government of Maharashtra)

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Mercedes Benz

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

Mercedes-Benz a pioneer in the International industry owns brands such as **Mercedes-Benz, Smart, Maybach, Freightliner** and others. These brands represent a formidable force in the automotive industry and reflect not just pioneering technology but technology that is path breaking. Today its brands stand for Technology, Safety, Reliability, Comfort and Environment. In alliance with several other component manufacturers of repute, they are developing new and advanced systems that are taking automotive technology to new heights.

Mercedes-Benz India Private Ltd. since its establishment in 1994 has been one of the first auto joint ventures set up in India. The company has a long-term commitment to the Indian market. Government Polytechnic, Aurangabad and Mercedes-Benz India Private Ltd. had jointly introduced the **Advanced Diploma in Automotive Mechatronics** course. 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: Mercedes Benz India Ltd. Is offering Scholarship.

1. Scholarship for low Economic background: - Two Eligible Students (Male) based on their family Income and Entrance Test Merit.
2. Scholarship for Female Student: - One Eligible Students (Female) based on their family Income and Entrance Test Merit.

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.

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 company.

Admission Process: Admission to the course is through Entrance & Practical Test.

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 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.

Entrance examination test center: Government Polytechnic, Osmanpura, Peer bazar, Station Road, Aurangabad. 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.

Examination Venue: Government Polytechnic, Osmanpura, Peer bazar, Station Road, Aurangabad

NOTE: The candidates should reach for Entrance test least 30 minutes before the commencement of the test exam. No separate letter/Hall ticket will be issued in this regard.

ADMISSION SCHEDULE

Advertisement in News Papers	: 10.12.2018 to 17.12.2018 in different News Papers
Last date for receipt of filled admission form	: 27.12.2018 up to 11:00 am
Entrance Test	: 27.12.2018 - 12:00 afternoon
Practical Test	: 28.12.2018 – 11:00 am
Display of merit list	: 03.01.2019 - 04:00 pm
Reporting for confirmation of admission	: 09.01.2019 up to 2:00 pm
Waiting list will be operated	: 09.01.2019 at 4:00 pm
Commencement of course	: 14.01.2019.

Selected candidates will be required to produce original educational documents for verification and 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)**

For details contact:

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