

Diploma in Mechanical and Electrical Engineering

The Diploma Mechanical and Electrical Engineering is designed for technical aspirants who wishes to peruse their career or those who are working in the electrical and Mechanical Industry. This course would help to enhance the candidate technical knowledge and practical skills to work in the growing demand field of electrical and mechanical servicing etc considering the technological trends and latest technological needs.

This programme provides the students with the knowledge and practical skills to cope with latest technology in mechanical engineering specialising in the field of maintenance and management. The programme offers courses such as troubleshooting and diagnosis skills, Computer Aided Engineering, Fluid Mechanics, Mechanical Control System, Aircon system and service.

Module Title and Learning Objectives

■ **Module 1: Engineering Mathematics**

- The aim of this module is to develop the mathematics skills needed by the students to underpin the engineering. The students would learn the various statistical and analytical methods in analysing and solving problems. Upon completion of the module , the students would be able to apply various mathematical methods and statistical techniques to interpret the data and solve the engineering related problems

■ **Module 2: Engineering Science Foundation**

- The aim of this module is to learn the various science theories and principles needed for the engineering foundation. The module deals with the various electrical, Mechanical and electronic concepts and its principles. The module would also cover some of the basic modelling and scientist analytical approach needed to for engineering foundation.

■ **Module 3: CAD and Simulation**

- The aim of this course is to introduce students about the concepts and need of CAD designs and its related simulations. This module would be module would be introducing CAD tool like AUTOCAD or SolidWorks and would go through the basic command on drawing 2D and 3D designs. The module would be covering the basic mathematical concepts needed for CAD based designs.

■ **Module 4: Fundamentals of Electrical and Mechanical**

- The course covers the basic of Electrical and Mechanical Design, and the basics Mechanical & Electrical components. The students would learn the design concepts, the need, applications interface of Electrical and Mechanical design. At the end of the course, the students would understand the various fundaments concepts in electrical and mechanicals design used in building and other application

■ **Module 5: Electrical Machines and Technology**

- The aim of this course is to teach the students with fundamentals of Electrical machines its concepts and the fundamental working principles . The students would be learning the basic methodology and applications using electrical machines
- **Module 6: Fluid Hydraulic and Pneumatics Mechanics**
 - This module will provide the students with basics of pneumatic and hydraulic systems and with a wide range of complex pneumatic, electro-pneumatic control systems and hydraulic as well as to develop ability to design, assemble and operate the controls. The participant will be able to read and assemble circuit with additional condition. The module would also teach some of the simulation based practical programming
- **Module 7: Built Environment [M&E Service and Maintenance]**
 - The module will cover relevant topics in the services and maintenance of Mechanical and Engineering (M&E) projects and its equipment. This module covers various service methodologies and its norms used in the industry. The module would also cover various maintenance aspects as well needed for a proper build Environments
- **Module 8: Air-condition system [ACMV & HVAC]**
 - This module will help the to acquire relevant skills in Aircon and Mechanical ventilation maintenance and its associated topics like heat process, ventilation mechanism, piping, controls and electrical diagram. The topic would also cover the Aircon systems used in the home, commercial and industrial places. The course would also go through the complete control systems , its various energy management techniques etc
- **Module 9: Building Automation Technology**
 - The modules discuss about the various building automation technologies. The State-of-the-art smart buildings play a key role in the advanced power grids known as smart grids. By expertly combining building technology with energy transmission and distribution, smart grids can significantly improve energy efficiency while reducing greenhouse gas emissions with ground-breaking effect
- **Module 10: Risk Management and Business Continuity**
 - This topic would cover the Business continuity management and disaster recovery are about an organization being prepared for business disruption and taking the necessary actions to get the business operational as soon as possible after an incident occurs. This course provides a strong foundation in each area by looking at what business continuity management is, why it's important and how it can be implemented within the overall risk management process, before reviewing the disaster recovery process.

Minimum Entry Requirements:

- Age: 18 years old
- Language: Minimum C6 in GCE O Level English
- Academic: At least 3 GCE "O" Level passes, including minimum C6 pass grade

Mode of Delivery:

Students can achieve the guided learning hours in combination of face-to-face classroom interactions, self-study and group study as well as research work. They will be required to attend a certain number of lecture hours to support their studies, and will receive guidance to complete the learning hours.

Duration:

- 12 months (Part-time)

Award Criteria:

Upon completion of all 10 modules the Diploma in Mechanical and Electrical Engineering Certification will be awarded by Global BW College. The student must achieve atleast 75% (part-time) attendance requirement per module.

DATES:

DATE	DAY	TIME
07 Jan 2026	Wednesday	7:00pm-10:00pm
11 Feb 2026	Wednesday	7:00pm-10:00pm
25 Mar 2026	Wednesday	7:00pm-10:00pm
29 Apr 2026	Wednesday	7:00pm-10:00pm
03 Jun 2026	Wednesday	7:00pm-10:00pm
08 Jul 2026	Wednesday	7:00pm-10:00pm
12 Aug 2026	Wednesday	7:00pm-10:00pm
16 Sep 2026	Wednesday	7:00pm-10:00pm
21 Oct 2026	Wednesday	7:00pm-10:00pm
25 Nov 2026	Wednesday	7:00pm-10:00pm