



Diploma Programmes



GMI programmes are significantly relevant to industry, dynamic and result-directed. GMI has an eminent reputation throughout the years of establishment, as a catalyst of adept and competent students in various fields namely designing manufacturing, operation, maintenance, fault analysis and complex production plant repair, machinery, equipment, tools and manufactured products. Equipped with the ability to optimize their combined theoretical and hands-on knowledge in their fields of specialization, GMI students have the vital distinctiveness that has noticeably set them apart from the others in the industrial sectors.

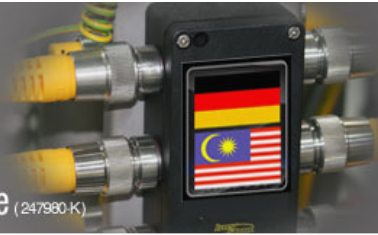
During the first year, students are exposed to the fundamental knowledge of the relevant fields. As they progress into their second year, students are given advanced training related to their specializations and later in the final year, they apply the knowledge and skills acquired into their in-plant training and final year project. With the implementation of the multi-disciplinary training concept, aided with areas of specialization, students are undoubtedly nurtured to be versatile and innovative in performing tasks in real working environment.

Industrial Electronics

Diploma in Industrial Electronics (Mechatronics)

In the field of a union between precision mechanical engineering, electronic control and systems, **Mechatronics** comprises the provisions of a system of modelling and analysis, application of microprocessors and microcontrollers in mechatronic systems, sensors and actuators in mechatronic systems, intelligent systems for accurate operation of mechatronic systems, and application of mechatronic systems in autotronics, bionics, and avionics which are central to mechatronics

At GMI, Mechatronics training concentrates on the integration of the physical elements namely electrical electronics and mechanical with information technology such as programming and networking offers an exciting experience exploring the course.



Diploma in Industrial Electronics (Process Instrumentation & Control)

In the field where concepts and implementations of instrumentation and control infuse all chemical processes and most of the time, beyond, into manufacturing and research laboratories, **Process Instrumentation & Control** comprises the provisions of making measurements and regulating systems of technology applied in various process plants such as food industries, chemical plants, oil and gas manufacturing, steel manufacturing and others.

At GMI, Process Instrumentation & Control training concentrates on electrical and electronics; computer monitoring and interfacing technology; process control and instrumentation; sensor technology; process technology and parameters; process measurements, drawings and planning; and distributed control system - all of which are the essentials of modern processes.

Diploma in Industrial Electronics (Electronics and Information Technology)

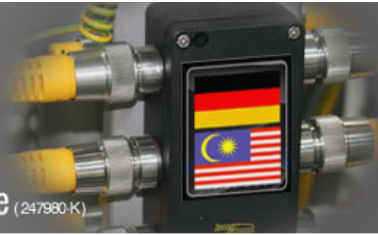
In the field of Electronics Systems and Communication section offers, Electronics & Information Technology comprises the provisions of fundamental subjects in the field of electrical and electronics such as electrical, electronics, digital systems, computer interfacing technology, communications and microcontroller.

At GMI, students will more equipped and ready to join the workforce as they gain broadcast knowledge in telecommunication technology, computer network design and administration, programming of microcontroller devices and its integration with the GUI or web-based for control and monitoring purposes. They will also develop skills in entrepreneurship and project management during their final year project implementation which is relevant to work environment.

Diploma in Network Security

In the field of computer and networking, **Network Security** comprises the provisions made in an underlying computer network infrastructure, policies adopted by the network administrator to protect the network (LAN, WAN & MAN) and the network-accessible data or resources from unauthorized access.

At GMI, Network Security training concentrates on computer system application, server administration and networking technologies. Trainees are also exposed to wired as well as wireless security system, vulnerability assessment and computer forensics, which is related to the hacking and cracking activities in the network in a relevant networking environment.



Production Technology

Diploma in Industrial Production Technology (Tool and Die Technology)

Tool & Die is the technology typically uses to fabricate all kind of tooling in the manufacturing sectors. Tool and Die makers are highly skilled trained workers serve and play an important key role in building and maintaining advanced automated manufacturing equipment. Their skilled are more to manufacturing of jigs& fixtures, dies, molds, machine tools such as milling cutters and form tools, gauges and other related tools which used in the manufacturing processes. Depending on which area they are in, the particular person may be called by variation of name including tool maker, die maker, mould maker, tool fitter, and etc.

Tool making is the process of making a production tools that produces product. The common tools include metal roll forming tools, tool bits, milling cutters, form tools, and etc. Die making is the subgenre of tool making which focuses on the making and maintenance of the stamping dies. This often includes making of punches, dies and die sets. The precision is the key objective to maintain the close tolerance to produce the accurate part.

The training programs are varies from one to another. Many tool and die program begin with apprenticeship with an employer which will take a minimum of 3 years, skill certificate (Sijil Kemahiran Malaysia level 1, 2 & 3) 1 ½ to 2 years or a diploma in Tool and Die Technology with 3 years minimum to complete the program.

Diploma in Industrial Production Technology (Mould Technology)

Plastic processing, Injection molding theory and design technologies are combined to produce a medium of mass production termed as Plastic injection moulds. The use of plastics have expanded rapidly during the last several decades, with applications continually expanding, and developed into new products. The significant challenge in producing an injection moulded part results to a complex interaction between material, part design, mould and process.

Each plastic part produced presents different degrees of challenge, and a mould must be custom designed and built. An engineer or a company faces these challenges and financial risks to ensure that the mould produced will be successful and aid further manufacturing process. Local companies and Multi National companies operating in Malaysia has the capacity to run production in large volumes, quickly with excellent repeatability, and at minimum cost. In Malaysia, the industry has reached a successful level and adequate capabilities, providing growth for the economy and careers for our people.

In GMI, the training and learning in plastic injection moulding process is the predominant method for producing plastic parts. Trainees are exposed to modern manufacturing methods,



with emphasis on conventional and CNC machining, Injection moulding theory and design, measurement techniques and quality assurance. Overall, the training in GMI equips an individual to become competent in this field. Trainees will be ready for employment in the manufacturing sector, particularly in the field of mould technology

Diploma in Product Design and Manufacturing

Product design begins with an idea in mind. It is an approach to problem solving of daily lives and help humans live better. Design activities are systematic in new product development. It begins with idea generation, concept development, testing and manufacturing or implementation of a physical object or service.

As Product Designers, they conceptualize and evaluate ideas, making them tangible through products in a more systematic approach. The role of the product designer combines art, science and technology to create tangible three-dimensional goods. This role has been facilitated by digital tools that allow designers to communicate, visualize and analyze ideas in an advanced methods compared to the past.

The role of manufacturing in this programme is to enhance students' knowledge and skills, in order to make and realize the product design. This helps to smoothen the transition between ideas to products in the real working environment. Further, this programme differs from industrial design, which defines the field of a broader spectrum of design activities, such as service design, systems design, interaction design as well as product design.

Product designers are equipped with the skills needed to bring products from conception to market. They should have the ability to manage design projects, and prove individual design and manufacturing capabilities. Among the important design aspects to be fulfilled are aesthetics, suitable technology, ergonomics, usability, stress analysis and materials engineering.

Diploma in CNC Precision Technology

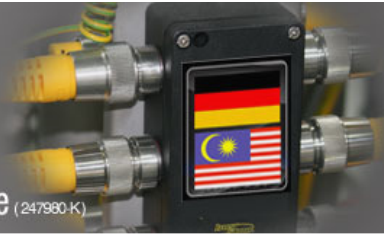
CAD/CAM

Due to the increasing demand in the modern industries, the computer is used to produce, revise, store and transmit technical drawings. This method of producing drawings is called Computer-Aided Design or Computer - Aided Drafting (CAD). Other term such as Computer-Aided Manufacturing (CAM) is often used in conjunction with the team CAD. CAD/CAM refers to the integration of computer into the design and production process.

CAD/CAM is used to describe the use of computers in the total manufacturing process, from design to production, publishing of technical materials, marketing to cost accounting. The single concept that these processes refer to is the use of a computer and software to aid the engineer or designer in the preparation and completion of a task.



German-Malaysian Institute (247980-K)



Our Business

“Mapping New Horizons”

CNC

Mass production and the need to automate machinery developed a demand for greater precision and implied greater competition in the marketplace. These needs have pushed us to search for ways in which production depends more on machines than on human capabilities.

Therefore CNC development has also had a large impact on machine tool design. Cutting tool and pallet changers have also now been introduced, as well as automatic loading and unloading of workstations; and the latest inspection systems and sensors now offer measurement dimensional checks within milliseconds. CNCs have made a major contribution to the realization of high efficient manufacturing at a reasonable cost.