

# DIPLOMA IN MECHATRONGS TECHNOLOGY

# DIPLOMA IN MECHATRONICS TECHNOLOGY

MECHATRONICS TECHNOLOGY SECTION (DEPARTMENT OF ELECTRONIC AND COMPUTER)

### **STUDY DURATION:**

36 MONTHS (FULL TIME) ELIGIBILITY REQUIREMENTS:

### 1. SPM GRADUATE.

- i. Pass the SPM in these following subjects:
- Bahasa Melayu/ Malay Language
- Sejarah / History
- Matematik/ Mathematics
- Any one (1) subject other than the subjects mentioned above.

### **PROGRAMME SYNOPSIS:**

This 3-year learning programme is specifically designed to provide students with the knowledge and skills found in mechatronic technology that includes 5 disciplines, namely Robotic, Mechanical, Automation, Manufacturing, Instrumentation and Control Systems that are essential for industries that use automation systems. The programme conducted is skill-oriented which is expected to produce skilled and professional graduates who can master the theoretical and practical aspects required in the field of mechatronics. Among the knowledge and skills that will be taught to students is to produce CAD technical drawings in 2D and 3D, installing an electronic circuits, installing an electric circuits, blacksmithing, machining, installing pneumatic circuits, installing hydraulic circuits, programming robot arms, programming micro controllers, wiring and programming Programmable Logic Controller (PLC). The students will also be taught the correct mechanical installation concepts and methods as well as how to perform proper maintenance on an automation machine, including troubleshooting skills and finding the cause of problems on an automation machine. In addition, students' soft skills are also emphasized where students will also be taught skills in making presentations, supervising and managing project activities and maintenance activities as well as matters related to workplace safety. All the skills that are taught are expected to be able to adequately prepare future graduates before entering the workforce or continuing their studies to a higher level either at higher education institutes in the country or even abroad.

### **SYLLABUS CONTENT:**

Students will be exposed to and study the following subjects:

### YEAR ONE

Technical Drawing, Electrical and Electronic Assembly, Mechanical Assembly, Pneumatic and Hydraulic, Basic PLC Programming, Mechanical Workshop Practice, Engineering Drawing (CAD), Electrical and Electronic System Assembly, Mechanical System Assembly, Automation System Calibration, Electro-Pneumatic and Electro-Hydraulic System

### **YEAR TWO**

Automation System Maintenance, Electrical Motor, Advance PLC, Supervisory, Industrial Robot, Computer Programming, Automation System Design, Equipment Maintenance, Project Management, Microcontroller, Industrial Safety, Drive Technology, Final Year Project 1

### **YEAR THREE**

Automation System Installation, Automation System Commissioning, Process Control, Final Year Project 2, Industrial Training.

### **MACHINE AND TOOLS:**

FESTO Pneumatics Training Equipment, FESTO Hydraulic Training Equipment, Mitsubishi Robot Arm RV-2AJ, Solteq Flow and Level Control Machine, FESTO MPS Distribution Station, FESTO MPS, Sorting Station, FESTO MPS Buffer Station, FESTO MPS Testing Station, Siemens S7-300 PLC Training Equipment, Omron CP1e PLC, Oscilloscope, Function Generator, Multimeter, Power Air Servo Pneumatic Control Machine, Lucas-Nulle Power Electrical Training Machine, Luca Nulle 3 phase motor Control Machine, Servo Motor Trainer.

### **SOFTWARE**

Autodesk Inventor, Festo Fluidsim, MatLab, Arduino IDE, Visual Basic C++, Siemens TIA Portal, Omron CX Programmer.

### SPONSORSHIPS AND SCHOLARSHIPS

PTPK, JPA, Baltulmal, SUK Negeri (State Government Secretary), Yayasan Negeri (State Foundation), Yayasan Bank Rakyat (Bank Rakyat Foundation)

### **JOB PROSPECTS**

Assistant Engineer, Assistant Officer, Technology Assistant, Production Supervisor, Technical Éxecutive, Maintenance Technician, Production Technician, Process Technician, R&D Technician, QA/ QC Technician, Programming Technician, Product Designer, Planning and Control Officer, Draughtsman, Technopreneur, Researcher, Mechanical Engineering Technician, CAD/ CAM Technician, Technical Instructors and Technical Entrepreneur.

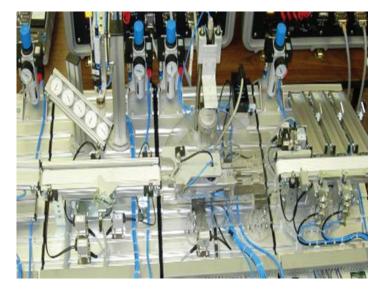
Graduates can also venture into a career in public sector services such as the Malaysian Armed Forces (ATM), Royal Malaysian Police (PDRM), Malaysian Fire and Rescue Department, Malaysian Civil Defense Force (APM), Malaysian Royal Customs Department, Malaysian Immigration Department and so on.

### THE PROSPECT OF FURTHER STUDIES

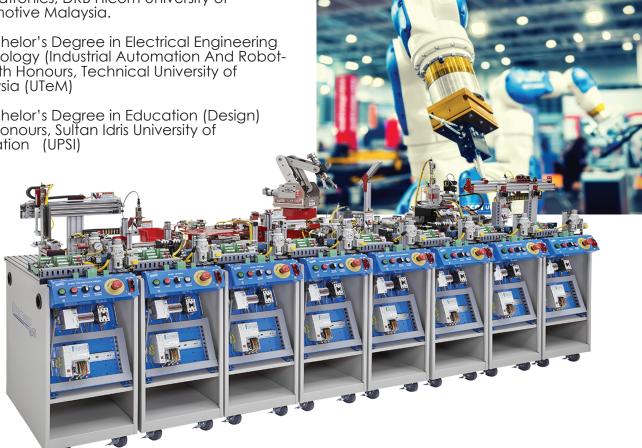
The opportunity to continue studying for a Bachelor's Degree at public and private educational institutions domestically or abroad, such as

- 1. Bachelor's Degree in Electrical Engineering Technology (Robotics and Automation Technology), University of Malaysia Perlis (UniMAP)
- 2. Bachelor's Degree in Engineering Technology (Honours) Instrumentation And Control, University Kuala Lumpur Malaysian Institute of Industrial Technology (UniKL MITEC)
- 3. Bachelor's Degree in Mechanical Engineering Technology (Honours) Mechatronics, DRB Hicom University of Automotive Malaysia.
- 4. Bachelor's Degree in Electrical Engineering Technology (Industrial Automation And Robotic) with Honours, Technical University of Malaysia (UTeM)

5. Bachelor's Degree in Education (Design) with Honours, Sultan Idris University of Education (UPSI)







# PENERAJU KEMAHIRAN TERBILANG

## **Pusat Latihan Teknologi Tinggi, Taiping**

Advanced Technology Training Center (ADTEC)Taiping

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