PENINSULA SKILLS

HRDC CLAIMABLE · SKM CERTIFIED

THE SHIP CAMPUS BATU KAWAN INDUSTRIAL PARK, PENANG


2026 TRAINING CATALOGUE · VOL. 01

# Our 2026 Training Programmes

*114 industry-aligned programmes across 8 disciplines — automation, logistics,manufacturing & management. Delivered from The Ship Campus,Batu Kawan.*

012-595 0053

peninsulaskills.com.my

info@peninsulaskills.com.my

| 114 | 8 | 2026 |
|---|---|---|
| COURSES | DISCIPLINES | VOL. 01 |

ABOUT PENINSULA SKILLS

# An institute of industrial capability — built for Malaysia's workforce.

**Peninsula Skills** operates from The Ship Campus in Batu Kawan Industrial Park, Penang — at the heart of Malaysia's electronics, semiconductor, and advanced manufacturing corridor.

Our 2025 catalogue spans **114 courses** across 8 disciplines, from PLC programming and robotics to lean manufacturing, data science, and logistics supervision. Every programme is hands-on, industry-aligned, and delivered by practitioners who have worked the factory floor.

We train the people who build, run, and optimise manufacturing lines — engineers, technicians, operators, supervisors. And we train the next generation entering the workforce through our partnerships with vocational colleges, ILPs, and IKTBN.

Most courses in this catalogue are **HRDC-claimable**, enabling your organisation to invest in upskilling at zero net cost. Our SKM Level 2 and Level 3 programmes carry national certification, recognised across Malaysia's TVET ecosystem.

**114**
Total Courses

**8**
Disciplines

**HRDC**
Claimable

**SKM**
Certified

CATALOGUE CONTENTS

# 8 DISCIPLINES. ONE CATALOGUE.

01 SECTION · IAEE


# Industrial Automation, Electrical & Electronics Technology

PLCs, motor control, robotics, IoT, and hands-on industrial systems.

32
Courses

3d Avg.
Duration

↦
Hands-on Practical

# Industrial Automation, Electrical & Electronics Technology

32 COURSES

PSAEE.001 — 3 DAYS

## PLC Programming

Fundamental PLC programming skills using Omron software for industrial automation. Hands-on ladder logic and real-world case scenario

TRAINING CONTENTS

- PLC basics, ladder logic programming, and troubleshooting
  Real-world case studies and exercises

PSAEE.002 — 3 DAYS

## Hydraulic System

Principles and applications of hydraulic systems with focus on maintenance and troubleshooting techniques.

TRAINING CONTENTS

- Hydraulic components and circuit design
  Maintenance and troubleshooting procedures

PSAEE.004 — 3 DAYS

## Microprocessor for Industrial Application

Design and apply microprocessors in industrial settings — architecture, functionality, real-world applications.

TRAINING CONTENTS

- Microprocessor architecture and programming

PSAEE.003 — 3 DAYS

## Electro Hydraulic System

Integration of electro-hydraulic systems with practical approaches to system control.

TRAINING CONTENTS

- Electro-hydraulic components and control systems
  Integration techniques and applications

PSAEE.006 — 3 DAYS

## Power Electronics & Drives

Power electronic devices, drive systems, industrial applications and troubleshooting.

TRAINING CONTENTS

- Power electronic devices and drive systems
  Industrial applications and troubleshooting

PSAEE.005 — 3 DAYS

## Microcontroller in C Language

In-depth microcontroller programming using C for embedded systems development.

TRAINING CONTENTS

- Basics of microcontrollers and C programming
  Applications in embedded systems

# Industrial Automation, Electrical & Electronics Technology (continued)

PSAEE.007

2 DAYS

## Basic Electric Motor Control

- Min. 2 pax

Fundamentals of electric motor control with hands-on system operations. Min. 2 participants.

TRAINING CONTENTS

- Motor operation and control techniques
  Practical applications and exercises

PSAEE.009

3 DAYS

## Motor Controller for Machine Maintenance

Motor controller functions, maintenance practices, and performance enhancement for machine operations.

TRAINING CONTENTS

- Basic electricity
  Electric components for signal input
  Signaling elements
  Signal processing components

PSAEE.011

3 DAYS

## Sensor and Control Applications for Differential Drive Mobile Robots

Control and sensor applications in robotics; differential drive systems.

TRAINING CONTENTS

- Introduction to mobile robot technology
  Mechanical components in mobile robots
  Electrical systems in wheel mobile robots
  Wheel mobile robot assembly (chassis & drive train)

PSAEE.008

3 DAYS

## Sensor Technology Application

Principles, types, and integration of sensors into industrial systems.

TRAINING CONTENTS

- Introduction to Electronics and Circuit
  Introduction to Sensors
  Types of Sensors
  Application of each type of sensors

PSAEE.010

3 DAYS

## Robotics and Microcontroller Control Systems

Robotic control systems using microcontrollers with practical programming and operational methods.

TRAINING CONTENTS

- Introduction to Robotics
  Designing robotic circuits
  Microcontroller and interfacing for robotics
  Robotic programming with sensors and encoders

# Industrial Automation, Electrical & Electronics Technology (continued)

PSAEE.012 — 3 DAYS

## Fundamentals of AC Electric Motors: Operation, Troubleshooting, and Maintenance

Diagnostics, troubleshooting, and maintenance techniques for AC electric motors. Hands-on fault prevention.

TRAINING CONTENTS

- Theory: Introduction to Electric Motors
  Control Pilot Devices
  Basic Troubleshooting Principles & Control Circuits
  3-phase and 1-phase AC motors, VSD/AC drives
  Motor failures, common causes, overload protection

PSAEE.015 — 3 DAYS

## Microcontroller for Motor Control Application

Microcontroller use for motor control, programming, troubleshooting and maintenance.

TRAINING CONTENTS

- Introduction to Microcontroller
  AC/DC machine, RC servo and stepper motor theory
  Microcontroller with sensors and actuators
  Programming motor control

PSAEE.016 — 3 DAYS

## Discovery on Variable Speed Drives

Variable speed drive operations, diagnostics, and optimisation techniques.

TRAINING CONTENTS

- The need for variable speed drives
  DC motors and drives
  AC motors and drives
  BLDC motors and drives

PSAEE.013 — 3 DAYS

## Discovery & Diagnostics on Electrical and Electronics

Diagnostics for electrical and electronic systems with practical fault detection and resolution.

TRAINING CONTENTS

- Theory: Circuits, currents, voltages, DC & AC
  Resistive, inductive, capacitive circuits
  Power, energy, logic circuits, op-amps
  Diode and power transistors

PSAEE.014 — 3 DAYS

## Programming ESP32 for Control System Application

ESP32 programming for industrial control system integration.

TRAINING CONTENTS

- Introduction to Microcontroller
  Basic control system theory
  Data transfer and communication with ESP32
  C Programming

# Industrial Automation, Electrical & Electronics Technology (continued)

PSAEE.017 — 3 DAYS

## Microcontroller for Radio Frequency Data Communication

Microcontroller applications in RF data communication for industrial data systems.

TRAINING CONTENTS

- Introduction to RF theory
  Data communication theory
  PIC microcontroller for data communication
  C code control algorithm for data transfer and receive

PSAEE.020 — 3 DAYS

## Electrical Engineering for Non-Electrical Engineers

Bridge the gap: fundamental electrical concepts for other engineering disciplines.

TRAINING CONTENTS

- Fundamentals: Ohm's Law, voltage, current, resistance
  Electrical components: resistors, capacitors, inductors, transformers
  AC vs DC systems, power generation & distribution
  Electrical safety standards and practices
  Troubleshooting common electrical issues
  Introduction to electrical diagrams & symbols

PSAEE.022 — 3 DAYS

## Signal Processing: Theory & Application

Principles and practical techniques of signal processing with Python hands-on.

TRAINING CONTENTS

- Continuous vs discrete signals
  Sampling theory and aliasing
  Fourier transform and frequency domain
  Signal analysis with Python

PSAEE.018 — 3 DAYS

## Microcontroller for Control System

Design and apply microcontrollers for control systems — integration and optimisation.

TRAINING CONTENTS

- Introduction to Control System Theory
  Introduction to Microcontroller
  Data transfer and communication
  C code programming for PID control algorithm

PSAEE.019 — 3 DAYS

## Neural Network with Python

3-day intensive on neural networks using Python — design, implementation, and fine-tuning.

TRAINING CONTENTS

- Neural networks and Python basics
  Building neural networks with Tensor Flow/Keras/PyTorch
  Advanced topics and real-world applications

PSAEE.021 — 3 DAYS

## Industrial Communication

Wired and wireless communication technologies for industrial automation.

TRAINING CONTENTS

- Fundamentals of industrial communication
  Industrial Ethernet and applications
  Wireless communication (IoT and Industry 4.0)
  Network topologies and data transmission
  Diagnose & resolve communication failures

# Industrial Automation, Electrical & Electronics Technology (continued)

PSAEE.023 — 3 DAYS

## Image Processing: Theory & Application

Image enhancement, filtering, segmentation with hands-on industry- standard tools.

TRAINING CONTENTS

- Digital image processing fundamentals
- Image representation and histogram analysis
- Basic image operations in Python
- Noise reduction and smoothing filters

PSAEE.026 — 3 DAYS

## IoT Integration for Mechatronics Systems

3-day intensive on IoT integration with mechatronics — sensors, actuators, microcontrollers, cloud.

TRAINING CONTENTS

- Fundamentals of IoT and mechatronics sensors, actuators, communication modules
- IoT architecture and protocols (MQTT, HTTP)
- Arduino, Raspberry Pi, ESP32

PSAEE.027 — 3 DAYS

## PCB Design and Fabrication

End-to-end PCB design, layout, and fabrication with industry - standard tools.

TRAINING CONTENTS

- Types of PCBs: single-sided, double-sided, multi-layer
- Schematic diagrams and design rules
- Component selection and placement
- PCB layout: layer stack-up, routing, signal integrity

PSAEE.024 — 3 DAYS

## Optical Proximity Sensing Technology

Fundamentals, signal interpretation, and real-world applications of optical proximity sensing for object detection.

TRAINING CONTENTS

- Fundamentals of optical sensing technology
- Signal processing in optical sensing
- Applications and troubleshooting

PSAEE.025 — 3 DAYS

## Essential Electrical and Electronics Fundamentals for Industry Professionals

Solid foundation in electrical / electronics engineering — voltage, current, resistance, circuit theory.

TRAINING CONTENTS

- Basic electrical concepts and Ohm's Law
- Electrical components and simple circuits
- Semiconductors, diodes, transistors
- Power supplies and voltage regulation

PSAEE.028 — 3 DAYS

## Advanced Techniques in PCBA Testing

Modern PCBA testing techniques, tools, and compliance methodologies.

TRAINING CONTENTS

- Overview of PCBA testing processes
- Testing tools and equipment selection
- Functional, boundary scan, environmental stress testing
- Industry standards and compliance

# Industrial Automation, Electrical & Electronics Technology (continued)

PSAEE.029 — 3 DAYS

## Electronic Components Testing and Repair

**Principles of electronic parts testing, failure detection, and quality assurance.**

TRAINING CONTENTS

- Importance of testing in electronics
- Overview of testing techniques
- Diagnostic tools and interpretation
- Quality benchmarks and compliance

PSAEE.030 — 3 DAYS

## Troubleshooting for PCBA and Electronic Components

**Systematic troubleshooting for PCBA and electronic components with hands-on exercises.**

TRAINING CONTENTS

- Troubleshooting principles
- Identifying PCBA and component issues
- Step-by-step troubleshooting methods
- Documenting troubleshooting activities

PSAEE.031 — 3 DAYS

## Effective Techniques in Electronic Component Replacement

**Precise component replacement — identification, soldering, desoldering, quality control.**

TRAINING CONTENTS

- Recognising common component failures
- Diagnostic tools and documentation
- Soldering and desoldering fundamentals
- Handling sensitive components

PSAEE.032 — 3 DAYS

## Basic Microcontroller using Online Platform (TinkerCAD/Wokwi)

**Introduction to microcontroller programming via online simulation — no hardware required.**

TRAINING CONTENTS

- Introduction to Microcontrollers
- Overview of TinkerCAD and Wokwi
- Microcontroller programming basics
- Circuit design using online tools

02 SECTION · IT

# Information Technology &IR 4.0

Programming, IoT, AI, machine learning, and emerging technologies.

28
Courses

3d Avg.
Duration

↦
Hands-on Practical

# Information Technology & IR 4.0

21· COURSES

PSDT.001 — 3 DAYS

## Visual Basic Programming 1

Foundational Visual Basic programming — syntax, structure, simple applications.

TRAINING CONTENTS

- Basics of Visual Basic
- Syntax and structure
- Developing basic applications
- Debugging and troubleshooting

PSDT.005 — 3 DAYS

## Development of IoT Application with NodeMCU & Cloud Computing

Node MCU-based smart devices integrated with cloud services.

TRAINING CONTENTS

- Introduction to Node MCU
- Programming Node MCU devices
- Cloud integration
- Data processing for IoT

PSDT.006 — 3 DAYS

## Development of IoT Application with Raspberry Pi & Cloud Computing

Raspberry Pi-based IoT systems — design, implementation, management.

TRAINING CONTENTS

- Raspberry Pi for IoT basics
- Programming Raspberry Pi
- Connecting IOT devices to cloud services
- Data management and analytics

PSDT.002 — 3 DAYS

## Visual Basic Programming 2

Advanced Visual Basic — interactive applications, real-world scenarios.

TRAINING CONTENTS

- Advanced techniques in Visual Basic
- Interactive applications
- Data handling and storage
- Performance enhancement

PSDT.004 — 3 DAYS

## Development of IoT Application with Arduino & Cloud Computing

Build connected IoTdevices with Arduino; integrate with cloud platforms.

TRAINING CONTENTS

- IoT and Arduino programming basics
- Designing IoT applications
- Cloud platforms for IoT
- Integrating IoT devices with cloud

PSDT.007 — 3 DAYS

## Embedded System with Arduino using C Programming

Arduino embedded systems using C — design, build, test.

TRAINING CONTENTS

- Introduction to embedded systems
- Arduino programming with C
- Building embedded applications
- Testing and debugging

# Information Technology & IR 4.0 (continued)

PSDT.008 — 3 DAYS

## Embedded System with Raspberry Pi using Python

Raspberry Pi embedded systems with Python — design, program, deploy.

TRAINING CONTENTS

- Overview of embedded systems with Raspberry Pi Python for embedded systems
- Designing embedded applications
- Testing and debugging

PSDT.011 — 3 DAYS

## C/C++ for Engineers

C/C++ programming tailored for engineering problem-solving.

TRAINING CONTENTS

- C/C++ basics
- C/C++ in engineering problems
- Algorithms and applications
- Performance enhancement

PSDT.012 — 2 DAYS

## IoT Architecture

Components,layers,and cloud integration of IoT architecture.

TRAINING CONTENTS

- IoT architecture fundamentals
- Components of IoT systems
- Communication protocols
- Cloud platform integration

PSDT.009 — 3 DAYS

## Java Programming

Object-oriented Java programming — write, test, deploy applications.

TRAINING CONTENTS

- Java basics
- Object-oriented programming in Java
- Creating Java applications
- Debugging and troubleshooting

PSDT.010 — 3 DAYS

## Programming for Everybody (Getting Started with Python)

Beginner-level Python—write,debug,create simple programs.

TRAINING CONTENTS

- Python programming basics
- Writing and executing scripts
- Debugging
- Simple Python applications

PSDT.013 — 3 DAYS

## Fundamentals of Web Design

HTML, CSS, responsive design — build user-friendly websites.

TRAINING CONTENTS

- Web design principles
- HTML for structure
- CSS for styling and layout
- Responsive design techniques

# Information Technology & IR 4.0 (continued)

PSDT.014 — 3 DAYS

## Cybersecurity for Education Practitioners

Cybersecurity essentials for educational institutions — threats, risk assessment, best practices.

TRAINING CONTENTS

- Cybersecurity in education
- Identifying cyber threats
- Cybersecurity best practices
- Data protection and compliance

PSDT.017 — 3 DAYS

## Wireless Communication System Development & Verification (IoT)

Wireless protocols,system design,testing methodologies for reliable IoT networks.

TRAINING CONTENTS

- Wireless communication basics for IoT
- Wireless protocols and standards
- Designing IoT communication systems
- System verification and testing

PSDT.019 — 3 DAYS

## Image Processing Exploration using OpenCV

Practical image processing with OpenCV — filtering, edge detection, object recognition.

TRAINING CONTENTS

- OpenCV setup with Visual Studio
- Image acquisition and specifications
- Image filtering and pre-processing
- Edge detection techniques

PSDT.015 — 3 DAYS

## Computer Vision

Principles and tools for analysing images and videos with computer vision.

TRAINING CONTENTS

- Computer vision basics
- Image processing techniques
- Machine learning for visual data analysis
- Industry applications

PSDT.016 — 3 DAYS

## ESP IoT Street Light with MATLAB ThingSpeak

Smart street lighting IoT systems using ESP and MATLAB ThingSpeak.

TRAINING CONTENTS

- IoT and smart street lighting
- ESP for IoT
- MATLAB ThingSpeak
- Designing and implementing IoT street lighting

PSDT.018 — 3 DAYS

## Artificial Intelligence in Manufacturing

AI for predictive maintenance, process optimisation, and decision- making in manufacturing.

TRAINING CONTENTS

- AI in manufacturing
- AI tools and techniques
- Predictive maintenance
- Process optimisation with AI

# Information Technology & IR 4.0 (continued)

PSDT.020 — 3 DAYS

## Applied Machine Learning with Python

ML concepts, algorithms, Python libraries — real-world case studies.

TRAINING CONTENTS

- Introduction to Python
- Data wrangling
- Model performance and evaluation
- ML algorithms

PSDT.022 — 2 DAYS

## Beyond Prompts: Empowering Your Workflow with Generative AI

Practical Generative AI for workplace productivity — no coding required.

TRAINING CONTENTS

- Introduction to Generative AI
- Large language models and multimodal AI
- Prompt engineering basics
- AI for text creation and productivity

PSDT.021 — 3 DAYS

## Essentials Python Programming

Solid Python foundation — syntax, data types, automation, applications.

TRAINING CONTENTS

- Python installation and environment
- Basic syntax and data types
- Control flow and functions
- Modules, packages, file handling

03 SECTION ISOP

# Industrial Safety & Organisational Practices

Lean,TPM, 5S, ISO 9001, OSHA, TQM,and production excellence.

28
Courses

3d Avg.
Duration

↦
Hands-on Practical

# Industrial Safety & Organisational Practices

28 COURSES

PSSOP.001 — 2 DAYS

## Advanced Manufacturing Engineering Techniques

**Layout design, process flow, material handling, and automation integration.**

TRAINING CONTENTS

- Manufacturing engineering techniques
  - Layout design principles
  - Process flow analysis
  - Automation integration

PSSOP.002 — 2 DAYS

## Lean Manufacturing Operations for Profitable Production

**Lean manufacturing principles — waste reduction, operational flow, profitability.**

TRAINING CONTENTS

- Principles of lean manufacturing
  - Tools for waste reduction
  - Improving operational flow
  - Profitability techniques

PSSOP.004 — 2 DAYS

## Single Minute Exchange of Die (SMED)

**Quick change over techniques to minimise downtime and boost efficiency.**

TRAINING CONTENTS

- Introduction to SMED
  - Internal and external setup activities
  - Streamlining changeovers
  - Case studies

PSSOP.003 — 2 DAYS

## Application of Maynard Operation Sequence Techniques (MOST)

**MOST for reducing cycle times and optimising workflow.**

TRAINING CONTENTS

- Overview of MOST
  - Time Measurement Units (TMU)
  - Analysing current workflows
  - Developing improved process sequences

# Industrial Safety & Organisational Practices (continued)

PSSOP.005 — 2 DAYS

## Value Stream Mapping (VSM): Current and Future State

Map current-state and future-state value streams to identify improvement opportunities.

TRAINING CONTENTS

- Value Stream Mapping fundamentals
- Current-state mapping
- Identifying bottlenecks and waste
- Future-state map design

PSSOP.008 — 2 DAYS

## Workshop Management & Operations

Effective workshopmanagement practices — efficiency and resource utilisation

TRAINING CONTENTS

- Workshop management fundamentals
- Resource allocation and scheduling
- Optimising workflow
- Real-world examples

PSSOP.010 — 2 DAYS

## Product Planning Strategies

Effective product planning aligned with production and organisational goals.

TRAINING CONTENTS

- Product planning fundamentals
- Product development goals
- Aligning with production resources
- Monitoring and revising plans

PSSOP.006 — 2 DAYS

## Design of Experiment (DOE)

Statistical methods to optimise production outcomes through experimental design.

TRAINING CONTENTS

- Experimental design basics
- Full Factorial, Fractional Factorial
- DOE Analysing experimental results
- Optimising process parameters

PSSOP.007 — 2 DAYS

## Production Planning and Control (PPC): Objectives and Elements

Coordinate and optimise production processes with PPC principles.

TRAINING CONTENTS

- PPC overview
- Setting PPC objectives
- Elements of production control
- Tools and techniques for planning

PSSOP.009 — 2 DAYS

## Pre-Production Processes

Pre-production planning for streamlined, error-free workflows.

TRAINING CONTENTS

- Understanding pre-production processes
- Planning and resource allocation
- Quality assurance in pre-production
- Planning tools and software

# Industrial Safety & Organisational Practices (continued)

PSSOP.011 — 2 DAYS

## Equipment Maintenance and Management

**Effective maintenance and management to minimise downtime.**

TRAINING CONTENTS

- Maintenance principles
- Troubleshooting equipment issues
- Preventive maintenance
- Scheduling and documentation

PSSOP.012 — 2 DAYS

## Fundamentals of Industrial and Manufacturing Engineering

**Industrial and manufacturing engineering principles for production optimisation.**

TRAINING CONTENTS

- Industrial engineering intro
- Manufacturing engineering concepts
- Process analysis and optimisation
- Technology integration

PSSOP.013 — 2 DAYS

## 7 Management and Planning Tools for Total Quality Control

**Strategic decision-making with the 7 management and planning tools.**

TRAINING CONTENTS

- Overview of 7 tools
- Application in strategic decision-making

PSSOP.014 — 2 DAYS

## 7 Quality Control Tools for Continuous Improvement

**Practical application of the 7 QC tools for quality and problem-solving.**

TRAINING CONTENTS

- Overview of 7 QC tools
- Practical quality control applications
- Problem-solving with QC tools

PSSOP.015 — 2 DAYS

## Comprehensive Overview of Production Planning and Control

**Tools and techniques to optimise production efficiency.**

TRAINING CONTENTS

- Production planning fundamentals
- Workflow optimisation tools
- Resource utilisation techniques

PSSOP.016 — 2 DAYS

## Quality Control and Problem-Solving in Automotive Assembly

**Advanced QC techniques for automotive assembly challenges.**

TRAINING CONTENTS

- Advanced quality control techniques
- Automotive assembly applications
- Solving production challenges

# Industrial Safety & Organisational Practices (continued)

PSSOP.017 — 2 DAYS

## Master Production Scheduling and Shop Floor Control

MPS and ALC for efficient production management.

TRAINING CONTENTS

- Master production scheduling principles
- Shop floor control techniques
- Optimising production management

PSSOP.018 — 2 DAYS

## Bills of Materials and Material Requirement Planning (BOM & MRP)

BOM and MRP principles for optimised material planning.

TRAINING CONTENTS

- Understanding BOM and MRP
- Optimising material requirements
- Case studies

PSSOP.019 — 2 DAYS

## Problem Solving Skill by Innovative and Creativity Circle (ICC)

Creative problem-solving using ICC methodology.

TRAINING CONTENTS

- Introduction to Creative Circles (ICC)
- Developing innovative solutions
- Case studies

PSSOP.020 — 2 DAYS

## TQM Awareness

Total Quality Management principles for organisational quality.

TRAINING CONTENTS

- Overview of TQM Principles
- Implementing QMS
- Best practices for maintaining quality

PSSOP.022 — 2 DAYS

## Workshop Management & Cost Estimation

Workshop management, cost estimation, resource optimisation.

TRAINING CONTENTS

- Workshop management fundamentals
- Cost estimation techniques
- Resource optimisation
- Workflow efficiency

PSSOP.021 — 2 DAYS

## Occupational Safety and Health (OSHA): Industrial Safety Practices

OSHA standards and industrial safety practices— hazard identification and mitigation.

TRAINING CONTENTS

- Overview of OSHA Standards
- Identifying workplace hazards
- Implementing safety measures
- Risk assessment and mitigation

# Industrial Safety & Organisational Practices (continued)

PSSOP.023 — 2 DAYS

## Total Productive Maintenance (TPM) Strategies

TPM strategies to minimise downtime and improve asset utilisation.

TRAINING CONTENTS

- Introduction to TPM
- Minimising equipment downtime
- Preventive maintenance techniques
- Enhancing asset productivity

PSSOP.026 — 2 DAYS

## Continuous Improvement Methodologies

Strategies to foster a culture of operational excellence.

TRAINING CONTENTS

- Continuous improvement fundamentals
- Strategies for operational excellence
- Culture of improvement
- CI tools and techniques

PSSOP.028 — 2 DAYS

## Root Cause Analysis for Problem-Solving

Root cause analysis for process improvement and effective problem-solving.

TRAINING CONTENTS

- Introduction to Root Cause Analysis
- Identifying and addressing issues
- Problem-solving tools
- Monitoring and evaluating solutions

PSSOP.024 — 2 DAYS

## 5S Workplace Organisation Practices

5S methodology for organised, efficient, safe workplaces.

TRAINING CONTENTS

- 5S methodology fundamentals
- Implementing 5S
- Workplace organisation case studies
- Sustaining 5S

PSSOP.025 — 2 DAYS

## ISO 9001: Quality Management System

Implement and maintain a robust QMS aligned with ISO 9001.

TRAINING CONTENTS

- Understanding ISO 9001
- Implementing QMS
- Maintaining QMS
- Auditing and compliance

PSSOP.027 — 2 DAYS

## Manufacturing Planning and Scheduling

Align production goals withr esources through planning and scheduling.

TRAINING CONTENTS

- Manufacturing planning principles
- Aligning goals with resources
- Scheduling techniques
- Real-world applications

04 SECTION · MSD

# Management & Soft Skills Development

SPC, data science, project management, Excel, Power BI.

6
Courses

2d Avg.
Duration

↦
Hands-on Practical

# Management & Soft Skills Development

6 COURSES

PSMSD.001 — 2 DAYS

## Statistical Process Control

SPC for monitoring and improving industrial processes — control charts, variability, corrective measures.

TRAINING CONTENTS

- Introduction to SPC
- Types of control charts
- Understanding process variation
- Data collection and analysis

PSMSD.003 — 2 DAYS

## Introduction to Data Science

Data science fundamentals — manipulation, visualisation, ML basics, ethical practices.

TRAINING CONTENTS

- Introduction to Data Science
- Tools and platforms
- Data wrangling and preprocessing
- Data visualisation

PSMSD.004 — 2 DAYS

## Project Management

Project management principles — resources, timelines, risks, execution.

TRAINING CONTENTS

- Principles of project management
- Planning and resource allocation
- Risk management
- Monitoring and controlling progress

PSMSD.005 — 2 DAYS

## Excel Mastery: Intermediate Skills

Intermediate Excel — advanced functions, charts, dashboards, macros, data security.

TRAINING CONTENTS

- Data management and analysis
- Advanced formulas and functions
- Data visualisation
- Automation and productivity tools

PSMSD.006 — 2 DAYS

## Power BI: Essential Skills for Data Analysis and Reporting

Foundational and intermediate Power BI for data analysis and reporting.

TRAINING CONTENTS

- Power BI ecosystem introduction
- Data connectivity and import
- Data transformation (Power Query)
- Data modeling and relationships

PSMSD.007 — 3 DAYS

## FYP Bootcamp for Students

Min. 20 pax

Structured Final Year Project support — project selection, development, presentation.

TRAINING CONTENTS

- Project and discipline cluster identification
- Problem statement classification
- Cluster-based crash course
- Methodology and project development


# Certificate of Competency — Bosch Rexroth

certified hydraulic ,PLC, and IoT training (minimum 5 pax)

3
Courses

2d Avg.
Duration

↦
Hands-on Practical

# Certificate of Competency — Bosch Rexroth

3 COURSES

BR.001

3 DAYS

## Hydraulic and Electro-Hydraulic System (Bosch Rexroth)

Min. 5 pax

OEM-certified hydraulic systems training — fluid properties, pressure control, valve operation, system design.

TRAINING CONTENTS

- Introduction to Hydraulic Systems
- Fundamental principles of hydraulics
- Hydraulic system design
- Graphical representation

BR.003

3 DAYS

## Internet of Things (IoT) and Its Application (Bosch Rexroth)

Min. 5 pax

OEM-certified IoT — architecture, protocols, sensors, cloud, data analytics, security.

TRAINING CONTENTS

- IoT and Industry 4.0
- Knowledge disciplines for IoT
- Electronic theories and applications
- Digital input / output for IoT nodes

BR.002

3 DAYS

## Industrial Automation using PLC (Bosch Rexroth)

Min. 5 pax

OEM-certified PLC automation — hardware, programming, HMI, networking, troubleshooting.

TRAINING CONTENTS

- Introduction to PLCs
- PLC programming fundamentals
- BOSCH MMS 4.0 operation procedure and safety
- HMI integration

06 SECTION · SKM


SKM LEARNING SESSION

# Malaysian Skills Certificate(SKM)

Nationally-recognised Level 2 and Level 3 competency certifications.

4
Courses

TBA

↦
Hands-on Practical

# Malaysian Skills Certificate (SKM)

4 CERTIFICATIONS

LEVEL 2

C261-001-2:2020

DURATION TBA

## SKM Level 2 — Electronic Components and Boards Testing, Troubleshooting and Maintenance (PPA-PPT)

National SKM Level 2 certification for electronic testing, troubleshooting, and maintenance.

COMPETENCY UNITS

- C01 Electronic Parts Testing
- C02 Electronic PCB Assembly Testing
- C03 Electronic Component & PCBA First Level Troubleshooting
- C04 Electronic Component Replacement
- C05 In-Circuit Tester Maintenance
- Practical Assessment

ENTRY REQUIREMENTS

2 years of experience in electronics

LEVEL 3

C261-001-3:2020

DURATION TBA

## SKM Level 3 — Electronic Components and Boards Troubleshooting and Supervision (PPA-PPT)

National SKM Level3 certification for advanced troubleshooting and supervision.

COMPETENCY UNITS

- C01 In-Circuit Tester (ICT) Performance Verification
- C02 PCBA Functional Tester Performance Verification
- C03 Electronic Components & PCBA Second Level Troubleshooting
- C04 Board Testing, Troubleshooting & Maintenance Work Supervision
- Practical Assessment

ENTRY REQUIREMENTS

3 years of experience in electronics

LEVEL 2

IL-013-2:2014

DURATION TBA

## SKM Level 2 — Logistics Operation (PPA-PPT)

National SKM Level2 certification for logistics operations — goods handling, transportation, inventory.

COMPETENCY UNITS

- C01 Inbound Cargo Handling
- C02 Outbound Cargo Handling
- C03 Customs & Port Clearance
- C04 Logistics Inventory Control
- C05 Logistics Data Administration
- Practical Assessment

ENTRY REQUIREMENTS

2 years of experience in Logistics Operations

LEVEL 3

IL-013-3:2014

DURATION TBA

## SKM Level 3 — Logistics Operation Supervision (PPA-PPT)

National SKM Level 3 certification for logistics supervision — leadership,compliance,operational efficiency.

COMPETENCY UNITS

- C01 Logistics Operation Planning and Monitoring
- C02 Logistics Customs Documentation and Compliance
- C03 Logistics Transportation Movement Coordination
- C04 Logistics Customer Service
- C05 Logistics Staff Supervision
- Practical Assessment

ENTRY REQUIREMENTS

3 years in Logistics Operations

07 SECTION LSC

# Logistics & Supply Chain Short Courses

Warehousing, freight forwarding, supply chain, INCOTERMS.

13
Courses

2d Avg.
Duration

↦
Hands-on Practical

# Logistics & Supply Chain Management — Short Courses

13 COURSES

LSC.001 — 3 DAYS

## Introduction of Logistics Warehousing

Economic impacts of logistics, systems and total cost approaches, warehousing career opportunities.

TRAINING CONTENTS

- Overview of Logistics
  Strategic planning for distribution channels
  Transportation systems and management
  Effective warehouse operations
  Inventory, Procurement Processes

LSC.003 — 2 DAYS

## Supply Chain Risk Management

Identify,evaluate,and manage risks in supply chains with frameworks and tools.

TRAINING CONTENTS

- Introduction to Risk Management
  Theory, impact, challenges
  Risk identification, analysis, evaluation, mitigation, monitoring & review
  Dealing with uncertainties
  Risk management models

LSC.005 — 2 DAYS

## The Concept of Supply Chain Management

Comprehensive supply chain management — strategy, components, risk management.

TRAINING CONTENTS

- Importance and objectives of SCM
  Global dimension and flow
  Decision phases
  Manufacturing, logistics, physical distribution
  IT Role in Supply Chain
  Supply Chain Networking
  Risks - Identify, Analyse, Evaluate, Mitigate, Monitor & Review

LSC.002 — 2 DAYS

## Supply Chain Management: The Concept

Principles, components, and flow of goods/information/finances in supply chains.

TRAINING CONTENTS

- Supply chain management and objectives Importance of supply chain
  Global dimension and flow
  Manufacturing process in supply chain
  Logistics Management
  Warehouse & Transportation Roles in Supply Chain

LSC.004 — 2 DAYS

## Supply Chain Planning

Fundamental supply chain concepts, strategies, and functions in modern business operations.

TRAINING CONTENTS

- Introduction to Supply Chain Management
  Global dimension of supply chain flow
  Supply chain networking
  Demand management
  Distribution Channel
  Managing Fulfillment Operations
  Lean Distribution
  Decision Phases of Supply Chain

# Logistics & Supply Chain Management — Short Courses (continued)

LSC.006 — 5 DAYS

## Effective Warehouse Management and Safety

Min. 5 pax

Advanced warehouse management and safety compliance.

TRAINING CONTENTS

- Logistics management
  Effective warehouse management
  Inventory management
  Physical distribution
  Safety Aspect in Warehouse

LSC.007 — 1 DAY

## Logistics (Online Learning)

Online, Min. 5 pax

Freight forwarding, transport operation, global shipping fundamentals

TRAINING CONTENTS

- Freight forwarding: customer services, documentation, ports, transport planning, customs
  Transport operation management: functions, unit load, terminal, documentation
  Global commercial shipping: international trade, ships, seaports, container depot, liner networks

LSC.008 — 1 DAY

## Supply Chain (Online Learning)

Online Min. 5 pax

Supply chain best practices, emerging trends, procurement management

TRAINING CONTENTS

- Supply chain and logistics best practice
  Current issues and emerging trends
  Procurement management system
  Outsourcing and risk management

LSC.009 — 1 DAY

## Warehousing (Online Learning)

Online, Min. 5 pax

Warehouse operations, logistics warehousing, inventory management

TRAINING CONTENTS

- Fundamentals of warehouse operation
  Importance of logistics warehousing
  Warehouse inventory management
  Material handling

LSC.010 — 2 DAYS

## Fundamentals of Freight Forwarding

Foundational freight forwarding — multimodal transport, customs, documentation.

TRAINING CONTENTS

- Introduction to Freight Forwarding
  Customer services
  Documentation operations
  Port/airport operations
  Transport Planning
  Customs Excise & Warehouse Licensing

LSC.011 — 2 DAYS

## Transport Operation Management

Fleet maintenance,driver management,scheduling, and operational challenges.

TRAINING CONTENTS

- Functions, components and characteristics
  Unit load concept
  Material handling
  Transport management system
  Terminal Operations
  Transport Documentation

# Logistics & Supply Chain Management — Short Courses (continued)

LSC.012

2 DAYS

## Global Commercial Shipping

**Fundamentals of international shipping, regulations, and trends.**

TRAINING CONTENTS

- Business of shipping International trade
  Types of ships
  Seaport and terminal operations
  Container Depot
  Liner Shipping Network

LSC.013

2 DAYS

## Mastering INCOTERMS for Effective Global Trade

**INCOTERMS in global trade — risk, cost-sharing, legal implications.**

TRAINING CONTENTS

- Introduction to INCOTERMS
  Categories and structure
  Buyer and seller responsibilities
  Selecting the right INCOTERM

08 SECTION · PLM


# Professional Certification in Logistics

Modular 7-part programme covering logistics fundamentals to sustainability.

7
Modules

1.5d Avg.
Duration

↦
Hands-on Practical

# Professional Certification in Logistics Management

A structured modular programme for the seven targeted manufacturing industries—electronics & semiconductor, medical device, automotive, food & beverage, consumer goods, renewable energy, and e-commerce logistics.

7 MODULES
MODULAR
PROGRAMME

1
MODULE

## Fundamentals of Logistics Management

2 DAYS · PHYSICAL CLASS

Foundational logistics and supply chain management concepts — flow of goods, information, KPIs.

MODULE CONTENTS

- Introduction to logistics concepts
- Types of logistics: inbound, outbound, reverse, green
- Key Performance Indicators (KPIs)
- Practical: Mapping a supply chain and analysing bottlenecks

2
MODULE

## Inventory and Warehouse Management

2 DAYS · PHYSICAL CLASS

Warehouse layout optimisation, inventory control, RFID/barcode, safety compliance.

MODULE CONTENTS

- Warehouse layout design and optimisation
- Inventory Control (ABC, JIT, EOQ)
- Technology in warehousing: RFID, Barcode
- Safety and compliance in warehousing
- Practical: Designing a warehouse layout

3
MODULE

## Transportation and Distribution Management

2 DAYS · PHYSICAL CLASS

Transportation modes, route planning, cost management, fleet management.

MODULE CONTENTS

- Transportation Modes and Applications
- Route Planning and Optimisation
- Cost Management in Transportation
- Fleet Management Systems
- Practical: Simulating route optimisation with logistics software

4
MODULE

## Digitalisation in Logistics

2 DAYS · PHYSICAL CLASS

Industry 4.0 in logistics — software, AGVs, cloud- based tracking.

MODULE CONTENTS

- Industry 4.0 Applications in Logistics
- Automated Guided Vehicles (AGVs)
- Cloud-Based Logistics Management Systems
- Hands-On: Operating logistics software and AGV simulations

5
MODULE

## Customs, Compliance, and Regulations

2 DAYS · PHYSICAL CLASS

International trade compliance, customs clearance, risk management for global supply chains.

MODULE CONTENTS

- International trade agreements and policies
- Documentation for export and import
- Customs clearance processes
- Risk management in global supply chains
- Practical: Preparing documentation for export- import

6
MODULE

## Sustainable and Green Logistics

1 DAY · PHYSICAL CLASS

Environmental impact, sustainable transportation and warehousing, circular supply chains.

MODULE CONTENTS

- Environmental impacts of logistics
- Sustainable transportation and warehousing
- Circular supply chains
- Practical: Developing a green logistics strategy

7
MODULE

## Problem-Solving and Decision-Making in Logistics

1 DAY · PHYSICAL CLASS

Data-driven decision-making, root cause analysis, leadership for logistics professionals.

MODULE CONTENTS

- Data-Driven decision making
- Root Cause Analysis for logistics issues
- Leadership skills for logistics professionals
- Workshop: Solving a real-world logistics crisis

GET IN TOUCH

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