intelitek

Robotics and Material Handling

COURSE OUTLINE

Catalogue Number	88-5007-0000
Category	Robotics
Duration	15 Hours
Pre-requisite Course	Advanced Robotic Programming with Yaskawa YRC-Series Controllers

Course Introduction

Activity 1: Introduction to RMH

- What is RMH?
- The Robotic Cell – A Review
- RoboCell Commands – A Review
- The Motoman Robotic System – A Review

Activity 2: Using Robotic Control Software II

- Robotic Control Systems
- Recoding and Teaching Positions
- Programming Tools
- Running and Stopping Programs

Lab Activity A: Setting up the Cell (Hardware Required)

Activity 3: Inputs and Program Jumps?

- Inputs and Outputs
- Simulating I/Os
- Program Jumps
- Using Input Signals to Control Robot Operation

Activity 4: Outputs II

- Outputs – A Review
- The I/O Experiment Table
- Sending Output Signals Manually
- Programming with Output Signals

Activity 5: Coordinate Systems

- Linear Movement
- Displaying Position Coordinates
- The Positions Window
- Programming with Linear Movement

Lab Activity B: Extending the Envelope (Hardware Required)

Activity 6: Polling

- Task Description
- Forcing Inputs
- Polling – Waiting for Inputs
- Programming and Running the Program

Activity 7: Subroutines

- Task Description
- Subroutines – A Review
- The RoboCell Subroutine Commands
- Programming with Subroutines

Lab Activity C: Laser Welding (Hardware Required)

Activity 8: Sensors

- Task Description
- Types of Sensors
- Creating a Conditional Loop
- Programming and Running the Program

Activity 9: The FMS

- Task Description
- The Conveyor and the Feeder
- The Interrupt Service
- Building and Running the Program

Activity 10: Conclusion

- Final Project: Objectives
- Final Project: Task

YRC Lab Project (Hardware Required)

Post-test