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Robotics & Materials Handling
SCORBOT-ER 9Pro

Robotics and Materials Handling courses features the SCORBOT-ER 9Pro robotic system and accessories such as a conveyor belt, rotary table, parts feeder, as well as I/O devices such as an experiment table, photoelectric sensor and microswitches.

Course Information

Type	
Robotics and Materials Handling (RMH) 1	Lab
Robotics and Materials Handling (RMH) 2	Virtual and Lab
Languages	English
Hours of instruction per course	15

Robotics & Materials Handling 1

In Robotics and Materials Handling 1, students work with the SCORBOT-ER 9Pro robot system and SCORBASE software in a workcell that includes a linear conveyor, parts feeder and I/O devices.

Course Outline

- Introduction to Robotics
- How Robots Work
- Using Robotic Control Software
- Recording Robot Positions
- Programming a Simple Pick and Place Task
- Absolute and Relative Positions
- Basic Robotic Programming Tools
- Block Alignment Project
- Feeders and Templates
- Peripheral Devices
- Linear Slidebase Project
- Encoders
- Roll and Pitch
- Programming the Robot to Execute Linear Movements
- Programming the Robot to Execute Circular Movements
- Final Project: Drawing a House

Robotics & Materials Handling 2

In Robotics and Materials Handling 2 students use RoboCell, a 3D-solid modeling robotic simulation software, to expand their programming skills through a variety of robotic workcells.
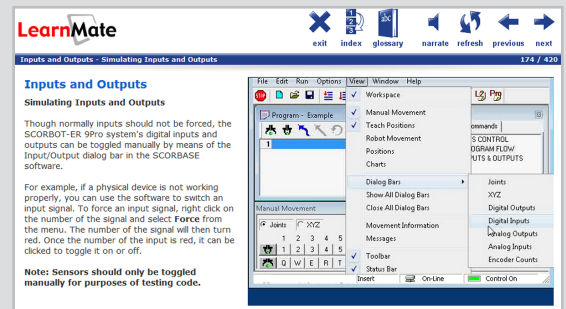
Course Outline

- Programming with Subroutines
- Digital Inputs
- Digital Outputs
- Delivering Materials with a Conveyor Project
- Conditional Branching
- Programming with Conditional Branching - Project #2
- Analog Inputs and Outputs
- Loops and Counters
- Contact and Non-Contact Sensors
- Programming a Sorting System Project

Robotics & Materials Handling SCORBOT-ER 9Pro (continued)

Robotics and Materials Handling include LearnMate®, Intelitek's innovative e-learning platform. Self-paced interactive LearnMate content may be deployed stand-alone or through the robust learning management system (LMS). The LearnMate e-learning suite provides everything needed for the ultimate blended learning experience:

- SCORM-compliant interactive content
- Anytime, anywhere accessibility
- Student and class management
- Grade tracking
- Skill/competency reporting mapped to national academic skill standards

Ordering Information

Curriculum

Robotics Materials Handling I with ER9, LM course	77-8094-0000
Robotics Materials Handling II with ER9, LM course	77-8095-0000

Hardware & Hardware Bundles

(see hardware data sheets for details)

SCORBOT-ER9 Robotic Arm	00-0430-0000
SCORBOT-ER9, Introductory Package	ROB-ER9-PACK
SCORBOT-ER9, Standard Package	ROB-ER9-STND
SCORBOT-ER9, Advanced Package	ROB-ER9-ADV

#? Projects

Yo-Yo	10-7001-1000
Shape Sorter	10-7005-1000

Courseware Bundles

Robotics & Material Handling I, w/ER9 Pro, LAB	**ROB-ER9-MAT**

Includes

- SCORBOT-ER9Pro
- Conveyor Belt tabletop
- I/O Experiment Table
- Gravity Feeder w/ Part Present Switch
- Cooredinate Grid Capsulat
- LM7 Content, Lab, RMH1 w/ER4U
- Package, RMH1 Materials
- Sign, Robotics and Automation
- Dividers, Short
- Dividers, Long
- Pallet Pkging, Grey Tote Container
- Install Guide, RMH1 w/ ER4U, LM Lab
- Proximity Sensor w/Power Supply for Conveyor
- Teach Pendant

Contact Us:

intelitek®

Toll Free:	800-221-2763	**Email:**
Phone:	603-413-2600	info@intelitek.com
Fax:	603-437-2137	www.intelitek.com