Robotics & Materials Handling
SCORBOT-ER 4u

Robotics and Materials Handling courses features the SCORBOT-ER 4u 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

<table>
<thead>
<tr>
<th>Type</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Robotics and Materials Handling [RMH] 1</td>
<td>Lab</td>
</tr>
<tr>
<td>Robotics and Materials Handling [RMH] 2</td>
<td>Virtual and Lab</td>
</tr>
<tr>
<td>Languages</td>
<td>English</td>
</tr>
<tr>
<td>Hours of instruction per course</td>
<td>15</td>
</tr>
</tbody>
</table>

Robotics & Materials Handling 1

In Robotics and Materials Handling 1 students work with SCORBASE for Controller-USB software to develop and write robot programs for manipulating objects and other automated tasks.

Course Outline

- Introduction to Robotics
- Robotic Control Software
- Recording Robot Positions
- Writing and Running a Robot Program
- Cartesian Coordinates
- Inputs and Program Jumps
- Outputs
- Joint and XYZ Coordinate Systems
- Relative Positions
- Loops, Polling, and Counters
- Subroutines
- Contact and Non-Contact Sensors
- Servo Control of the Conveyor
- I/O Control of the Conveyor

Robotics & Materials Handling 2

In Robotics and Materials Handling 2 Students work with RoboCell, a 3D-solid modeling robotic simulation software, to program and operate the SCORBOT-ER 4u robot.

Course Outline

- Basic Robotic Programming Tools
- Manipulating Blocks Project
- Programming the Robot to Execute Circular Movements
- Drawing a House
- Roll and Pitch
- Block Alignment Project
- Feeders and Templates
- Peripheral Devices
- Linear Slidebase Project
- Programming Using Encoder Values
- Conditional Branching
- Programming with Conditional Branching
- Analog Inputs and Outputs
- Programming a Sorting System Project
Robotics & Materials Handling SCORBOT-ER 4u (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 ER4u, LM course 77-8082-0000
Robotics Materials Handling II with ER4u, LM course 77-8083-0000

Hardware & Hardware Bundles

(see hardware data sheets for details)

SCORBOT-ER4u Robotic Arm 00-0413-0000
SCORBOT-ER4u, Introductory Package ROB-ER4U-PACK
SCORBOT-ER4u, Standard Package ROB-ER4U-STND
SCORBOT-ER4u, Advanced Package & Quality Control Station ROB-ER4U-ADV

#? Projects

Yo-Yo 10-7001-1001
Shape Sorter 10-7005-1000

Courseware Bundles

Robotics & Materials Handling I - LAB ROB-ER4U-MAT
INCLUDES:
- SCORBOT-ER4u, Standard Package
- SCORBOT-ER4u, Advanced Package & Quality Control Station
- Robotics & Material Handling I w/ER4U
- Robotics Automation Technology Skills Project
- Robotics Automation Project Parts
- Scorbot-ER 4u Fundamentals
- Scorbot-ER 4u Advanced
- Scorbot-ER 4u Materials Handling I
- Scorbot-ER 4u Materials Handling II

Robotics Automation Project Parts RAT-ER4U-ACC1

- LM7 Content, Robotics & Automation Project
- Assembly, Project, Competition Sensor Box
- Assembly,Project, Pneumatic Block Feeder, 12V
- Assembly, Project, I/O Interface
- Assembly, Project, Components For Workcell
- Assembly, Project, Power Supply, 12V
- Assembly, Project, E-Stop/Light Stack
- Assembly, Project, Energy Chain w/Robot Mount
- Install Guide Robotic Workcell

Robotics Automation Technology Skills Project RAT-ER4U-1000

- RAT-ER4U-ACC1 Project bundle
- SCORBOT-ER 4u
- LSB 1.0m, Belt, TT
- Teach Pendant
- Linear Conveyor-24V w/ Power Supply and Sensor

Contact Us:

intelitek

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

All specifications subject to change without notice. All trademarks are property of their respective owners. ©Intelitek 35-1007-8000 Rev-D