

Robotics – Computer Programming 1 | Multimedia Courseware



eLearning Course: M11801

Robots are used for a wide variety of tasks throughout every industry. In fact, as industries seek to automate more and more repetitive and dangerous tasks, robots are increasingly helping to reduce costs and increase efficiency in industrial facilities throughout the world. Amatrol's Robotics eLearning course (M11801) teaches learners essential robot operation and programming concepts applicable throughout modern industry. Learners using Amatrol's robot operation and programming eLearning course begin by studying the basic principles of robot operation and programming, including the fundamentals of interfacing and material handling. From these building blocks, learners begin practicing industry-relevant robotics skills relevant in a variety of applications, such as flexible manufacturing cells and quality and production control.

In-Depth Curriculum

In-Depth, Comprehensive Robot Operation and Programming Curriculum Connected to Real-World Skills

Amatrol's Robotics eLearning curriculum is unique in that it thoughtfully combines in-depth theoretical knowledge with practical, hands-on skills. This powerful combination of knowledge and skills solidifies understanding and creates a strong foundation for pursuing more advanced skills.

For example, the robot operation and programming eLearning course covers important topics, such as:

Basic Robot Operation

Learners begin with an introduction to basic robot operation, including power up and shutdown, homing, and end effector operation. Individual lessons focus on topics like robot safety, axes of movement, robot jogging, teach pendants, homing, and end effectors. Learners will also practice skills, such as jogging a servo robot using a teach pendant, homing a servo robot, and manually operating a robot gripper.

Basic Robot Programming

Learners will study the basics of robot programming, including teaching points and movement and end effector commands. Individual lessons focus on topics like how position points are recorded in a robot's memory, ways to stop a servo robot, and grasp and release commands. Learners will also practice skills, such as using a teach pendant to teach robot position points, running a servo robot program, and designing a robot program to perform a basic material handling task.

Interfacing and Material Handling

Learners using Amatrol's robotics eLearning course will study basic principles of interfacing and material handling, including I/O interfacing and looping and speed commands. Individual lessons focus on topics like label and branch commands, I/O interface commands, and applications of robots in material handling. Learners will also practice skills, such as: designing a robot program that uses looping, speed, and delay commands to move an object; connecting digital input and output devices to a robot controller; and designing a robot program that will unload an automatic machine.

Production Control

Learners using Amatrol's robot operation and programming eLearning course will study various aspects of production control, including operator input interfaces, loop commands, and relational and arithmetic operators. Individual lessons focus on topics like basic arithmetic operators, six relational operators, and the operation and function of loop commands. Learners will also practice skills, such as entering a robot program that uses an input command, designing a robot program that stops a production process if a quality standard is not met, and entering a robot program that has loop commands.

Multimedia

Highly-Interactive Multimedia Format Appeals to All Learning Styles

Amatrol's robot operation and programming eLearning course curriculum features a highly-interactive multimedia format. Stunning 3D animations, videos, pictures, voiceovers of all text, and interactive quizzes and exercises bring learning to life. Amatrol's multimedia curriculum contains elements that will appeal to every learning style, keeping learners motivated and engaged.

Click on the image below to view Amatrol's eLearning demo:

Anytime, Anywhere Access Promotes Self-Paced Learning

In today's fast-paced, technology-driven world, it's more important than ever to extend the reach of industrial skill training beyond the borders of traditional classrooms. Amatrol's eLearning meets the challenge for flexibility by offering in-depth, comprehensive technical skills training via an intuitive, easy-to-use web-based Learning Management System (LMS).

With anytime, anywhere online access, Amatrol's eLearning allows learners to set their own pace at home, on the job, in a traditional class setting, or a blended approach of these options. Click here to learn more about [Amatrol's eLearning and LMS](#).

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