

**Warning:** Undefined array key 1 in `/var/www/vhosts/amatrol.com/httpdocs/wp-content/themes/kallyas-child/dkpdf/dkpdf-index.php` on line 171

**Warning:** Trying to access array offset on value of type null in `/var/www/vhosts/amatrol.com/httpdocs/wp-content/themes/kallyas-child/dkpdf/dkpdf-index.php` on line 171

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## Robotics 1 | Basic Robot Operation and Teaching Points

Basic Robot Operation - WX13716-AB01UEN-E1

Objective 1: Define a Robot and Give an Application

Robot Applications

Many people believe that a robot is a machine capable of being reprogrammed and automated. However, programmable milling machines or a traffic light can be reprogrammed and automated. No matter how they are programmed, they still perform only one task: cut metal or turn on lights. The ability to perform different tasks makes a robot different than all other machines.

Robots are used in many different applications:

- Assembly
- Material handling
- Welding
- Machine loading
- Painting
- Gluing

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Amatrol's introductory Robotics eLearning course teaches articulated arm servo robotics and how it's applied in industrial tasks like assembly, material handling, machine tending, gluing, and inspection. Major topic areas covered in the introductory robotics multimedia courseware include basic robot operation, basic robot programming, and interfacing and material handling. Within these topics, learners will study: the operation of homing procedures for a servo robot; commands like grasp, release, and Pmove; applications of robots in material handling; and much more!

### In-Depth Curriculum

**In-Depth, Comprehensive Introductory Robotics eLearning Curriculum Connected to Real-World Skills**  
Amatrol's 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 precision gauging eLearning course covers important topics, such as:

### **Basic Robot Operation**

Learners begin with an introduction to robotic operation, including power up and shutdown, manual operation, homing, and end effector operation. Individual lessons focus on topics like five basic robot components, eight rules of robot safety, three types of job applications, function of the homing procedure, and two types of gripper finder designs. Learners will also practice skills, such as powering up and shutting down a Servo robot, jogging a Servo robot using a teach pendant, homing a Servo robot, and manually operating a robot gripper.

### **Basic Robot Programming**

From there, learners will study the components and operation of basic robot programming, including teaching points, basic programming, and movement and end effector commands. Individual lessons focus on topics like how position points are recorded in a robot's memory, four ways to stop a Servo robot, and operation of a move to point command. Learners will also practice skills, such as testing and editing teach points, running and stopping a Servo robot program, and designing a robot program to perform a basic material handling task.

### **Interfacing and Material Handling**

Finally, learners will advance to study interfacing and material handling, which includes modules on looping and speed commands, I/O interfacing, and material handling. Individual lessons focus on topics like operation of commands and program commands, function of a robot's digital inputs and outputs, and how robots are applied to plastics injection molding. Learners will also practice skills, such as entering a robot program that uses speed and delay commands, manually testing discrete inputs and outputs, and designing a robot program that will unload an automatic machine.

## **Multimedia**

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### **Highly-Interactive Multimedia Format Appeals to All Learning Styles**

Amatrol's Robotics 1 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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