



OTC DAIHEN INC.
ADVANCED WELDING & ROBOTIC SYSTEMS
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ROBOT PREVENTIVE MAINTENANCE

- A.
 - 1. Course Title: Robot Preventive Maintenance
 - 2. Course Number: PM
 - 3. Class hours: Thursday-Friday 9:00 AM to 12:00 PM, 1:00 PM to 4:30 PM
- B.
 - 1. Prerequisites: none
- C.
 - 1. **The Robot Preventive Maintenance Training course provides operators and maintenance personnel with the skills necessary to perform routine preventive maintenance on OTC robotic systems. This course is designed for individuals responsible for the daily upkeep and reliability of robotic equipment. Teach pendant functions are not reviewed in this course; therefore, students should already be familiar with basic robot operation prior to attending. There are no prerequisites for the Robot Preventive Maintenance Training Course; however, DAIHEN, Inc. recommends that all participants complete the Robot Training and Operation Course beforehand. Please note this course is a NON-WELDING course.**
- D.
 - 1. Textbooks (1) PM Training Guide.
- E.
 - 1. Other required materials: none
- F.
 - 1. Course objectives
 - The student shall be able to perform the following after completion of the course:
 - a. Understand incoming power supply needs.
 - b. Safely power up the robot and controller from a fully shutdown position.
 - c. Controller component identification.
 - d. Troubleshoot the robot controller.
 - e. WPS initialization and communication.
 - f. Back-up and restore system and program data.
 - g. Torch alignment, auto TCP.
 - h. Writing basic check point program
 - i. Origin check/ABSO offset procedure.
 - j. Various methods of crash recovery
 - k. Preventative maintenance schedule.
 - l. Perform task required to complete a 1yr, 3yr, and 6yr pm.

G. Grading: A grade of 72% or greater is required to successfully complete the course.

H. Course outline

1. Thursday - Students will learn, discuss and do practical labs involving the troubleshooting and maintenance for the manipulator and positioning equipment.
2. Friday - Students will learn, discuss and do practical labs involving the robot controller. At the end of this day there will be end of course discussion and a test.

I. Other requirements and notes

1. Smoking is not permitted in the building. A designated outdoor smoking area is available at the back of the building.
2. Class participation and completion of all exercises is required
3. All safety rules must be followed at all times
 - a. Eye protection must be worn at all times in the lab area
 - b. Leather closed-tip shoes are to be worn at all times
 - c. Long pants must be worn at all times. No shorts please.
4. Lunch break will be 1 hour each day. Normal lunch hours will be from 12:00 PM – 1:00 PM. Students are responsible for lunch.
5. A student who misses more than $\frac{1}{2}$ day of instruction may be removed from the class at the discretion of Daihen, Inc. management and asked to return to their normal workplace.
6. Please arrive no earlier than 15 minutes before class
7. Proper attire is required at all times. Please do not wear clothing bearing slogans or sayings that could be offensive to others.