



Istanbul  
**GEDİK University**

# ROBOTIC WELDING TRAINING PROGRAM



## Contact Information

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## Robotics WELDING TRAINING PROGRAM

### INTRODUCTION

Industrial robots are increasingly entering to all industrial sectors and major operations, like welding. This training program aims to provide theoretical knowledge and practical training and skill. Manual and semi-manual welding operations can be done with the use of Robotics and automation to have better quality, higher speed and productivity.

### THIS TRAINING PROGRAM WILL

- Teach welders or technicians to be “Robotics Welder” to have new skill about how industrial welding robots together with advanced welding machines operate to weld complex parts.
- Teach welders or technicians to be “Robotics Welder” how to prepare PLC program, parameter settings and welding program with robot.
- Provide “GEDİK ROBOTICS WELDER CERTIFICATE“ to demonstrate that candidate has successfully completed the program and now has new skill and competence.

### WHO SHOULD PARTICIPATE

**This advanced level of Robotics Welding Training Programme is designed for;**

- Qualified welders, technicians or engineers working in industrial companies where welding technology is used for fabrication of metallic components.
- Final year or PhD students studying Mechanical Engineering, Materials Science, Electrical or Mechatronic Engineering or doing research.
- Technical or Technology Teachers, teaching young students and preparing them for future jobs with new skills.

**MODULE 1:** Basics of Robotics and Otomation (1 Day)

**MODULE 2:** Operations of Robots and Safety Rules (1 Day)

**MODULE 3:** Welding with Robots (3 Days)

**Program Duration:** 5 Days

### COURSE FEE

**3.000 - USD / per participant** Minimum number of participants per Course is 6. The Program Fee includes;

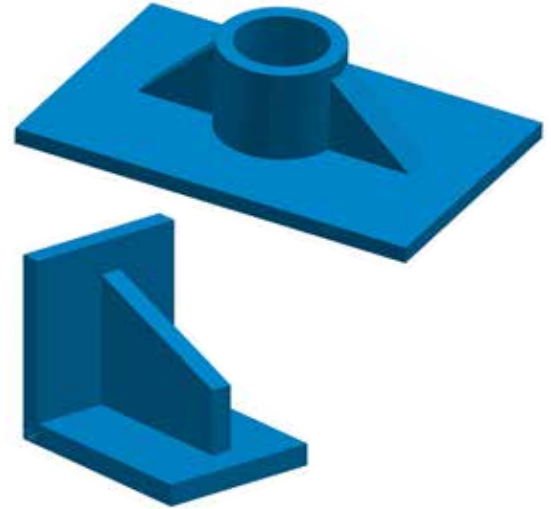
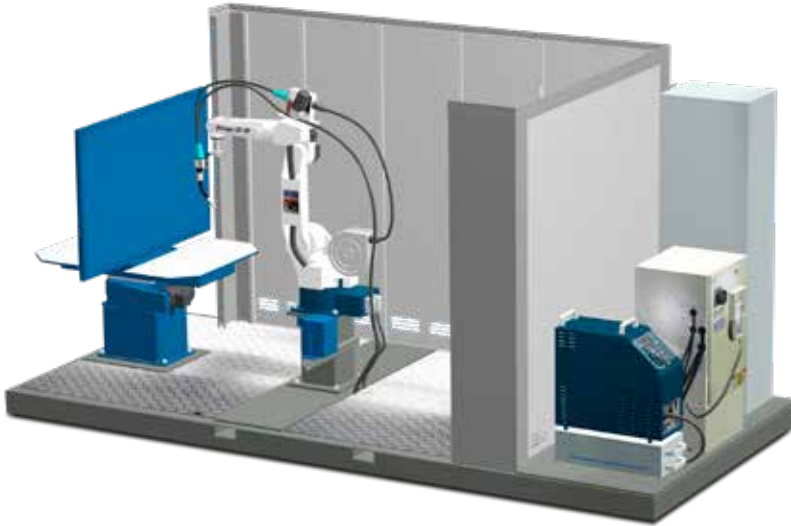
- All education and training documents, materials & test pieces (Steel and if required Aluminium sheets), Welding wires to be used in practices, International Welding Consumable Catalogue, Lunch & Coffee.

### CERTIFICATE

GEDİK ROBOTICS WELDER CERTIFICATE will be issued to the name of the candidate after successfully completion of the programme. Certificate will show the contents of the program.

**EACH MODULE IS LIMITED TO 4 PEOPLE**

|                    |  |
|--------------------|--|
| TRAINING EQUIPMENT | INDUSTRIAL ROBOT<br>INDUSTRIAL WELDING MACHINE<br>20 m <sup>2</sup> AREA |
|--------------------|--|



International Training Test Part



**Basics of Robotics and Automation**

**MODULE-1 SUBJECT**

- Working logic of robotics systems
- Operating logic of robot manipulator
- Safety issues of the industrial robots
- Robot controller and manipulator safety
- Robot coordinate system
- Manuel management and selection of appropriate coordinate system
- Commissioning overview
- Robot controller and manipulator settings
- Basics of workpiece measurement
- The teach pendant and program flows
- Add new program, delete program and copy program
- Run the system automaticly
- Backup and reload the system

1 day

## Operations of Robots and Safety Rules

### MODULE-2 SUBJECTS

- Programing paths for the workpiece
- Robot interface settings
- Programming warnings, errors and information
- Commissioning of inputs and outputs
- Writing a new PLC program with robot PLC program
- Transferring the robot encoder settings to the robot user
- Giving information about how to introduce Robot TCP

1 day



## Welding With Robots

### MODULE-3 SUBJECTS

- Communication protocol of welding machine and robot
- Resetting welding machine to factory settings, automatic welding machine
- Sharing welding machine maintenance information
- Introduction of welding machine at robot interface
- Transfer of welding parameter settings from the robot learning panel
- Transcription rules of welding program with robot
- Transmit robot oscillation settings

3 days







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 **Gedik Education Foundation**



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