Thank you for choosing to attend UR Academy Core Training - Virtual. This training is designed to make use of a physical UR e-Series robot through hands-on learning. This document will outline the necessary materials you will need to participate in this training.

Overview

Required	Hardware
	e-Series Robot (UR3e/UR5e/UR10e/UR16e)
	End Effector
	PC w/ Internet Connection
	Web Camera
	Microphone
	Print Outs
	Software
	Latest UR Robot Software (PolyScope)
	Robot's Safety Password

Recommended	Hardware
	+24V Digital Input Device
	Weighing Scale
	Peripheral Devices
	External Monitor
	Software
	MS Teams Desktop Application
	PDF Viewer

Details

Required Hardware

- UR e-Series Robot

  Online Core Training (Robot Edition) requires a physical UR e-Series robot. Training exercises are hands-on. Please limit 2 participants per 1 robot.

  Before training the robot should be removed from its packaging and mounted on a stable surface. The robot controller should be connected to 100-240VAC power and the robot arm should be connected to the robot controller. Please see the User Manual for setup details.

- End Effector

  A basic robot system requires a robot and a tool. Tools mounted to the end of the robot arm are called end effectors. This training accommodates a wide range of end effectors such as electric and pneumatic grippers, dispensers, and polishing tools, etc.

  Before training the tool should be mounted on the robot and connected per the device manufacturer's manual.

- PC w/ Internet Connection

  The PC will be your connection to the instructor and class. A high-speed, stable connection is strongly recommended.

- Webcamera

  This course is interactive and hands-on. To best communicate with your trainer and class, a visual of both you (the participant) and your robot system is required.

  A camera capable of capturing a wide environment, such as an external USB camera placed a short distance away, is strongly recommended.

- Microphone

  This course is interactive and hands-on. To communicate with your trainer and class, you will need a microphone.

  When working with a partner, a microphone capable of picking up the voices of both participants, such as one designed for video conferencing, is strongly recommended.

- Print Outs

    Class materials include:

    Workbook – this document contains the instructions for each hands-on exercise

    Reference Guide – this document contains information on how to implement each instruction

    Module Print Outs – this document is a convenient tool to perform specific module's exercises

    It is required to print the Module Print Outs. It is strongly recommended to print the Workbook and Reference Guide or to connect a second, external monitor to view these documents electronically while still able to view the trainer and class camera feeds.

Required Software

- Latest UR Robot Software (PolyScope)

    This training is designed around UR's latest robot software (PolyScope). All demos will be done using the latest software and some features may not be available in older versions.

    Please upgrade your software before the training. Software upgrades are free and the software can be found on UR's [Support Site](). Please follow the directions for upgrading in the Service Manual.

- Robot's Safety Password

    UR's integrated safety system is protected by a password. This password is set by the user and required to make changes to the robot's safety settings. If the password has been set, the participants should know the password before training to learn how to adjust the safety settings during the hands-on exercises.

    The user is responsible for setting and maintaining their own password.

Recommended Hardware

- +24V Digital Input Device

    UR robots have PNP digital input and output that operate at +24V (high) and 0V (low). It is **strongly recommended** to use an input device such as a switch, button, or sensor. An input device will greatly increase the programming options during hands-on exercises.

- Weighing Scale

  Participants using a gripper or other tool capable of moving a workpiece will need to adjust the robot's payload settings any time the weight of the workpiece is added to the total payload. A weighing scale is convenient for measuring the weight of your workpiece.

- External Monitor

  A second, external monitor is highly recommended for participants who choose to go paperless during this training. The external monitor will allow participants to view their Workbook and Reference Guide while also viewing the trainer and class.

  The Module Print Out listed above will still need to be printed.

- Peripheral Devices

  Participants are encouraged to make use of peripheral devices, such as sensors, conveyors, and LEDs, during hands-on exercises. This training is an ideal situation to learn how to connect and operate devices that will be used in final robot system integration and receive guidance from the trainer on their use.

  Please note that connection with and operation of some complex devices, such as PLCs and cameras, may be outside of the scope of this training. Participants interesting in learning more about connecting with these devices should talk with their trainer to find out about additional training courses.

Recommended Software

- MS Teams Desktop Application

  This is the application used for the videoconferencing portion of training. While it is possible to connect via your browser without installing any new software, the desktop application will provide a higher quality experience (video and audio).

- PDF Viewer

  Participants using a second, external monitor to view course materials will need to have PDF viewer software installed on their PC.

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