UNIVERSAL ROBOTS

A Teradyne Robotics Company

Certificate of completion

Educational Robotics Training - Core

Certificate number: E202508064108230

School name: Texas A&M University Robotics and Automation Design Lab

Kalen jaroszewski

6. August 2025

Universal Robots Academy

Curriculum

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Module 1: e-Learning
- Online e-Series Core Track Modules 1-8

Module 2: Safety
- Basic knowledge about Robotic environments as it pertains to safety
- Safety Sensors
- Situational Awareness
- Interactions between the robot and its surroundings

Module 3: Intro to Robotics
- Basic knowledge on the History of Robotics
- Traditional vs. Collaborative Robots
- An understanding of Robotics and Industry 4.0

Module 4: The Robotics World
- Basic knowledge on the different categories of Robots
- An understanding on the different types of Industrial Robots
- Understanding different applications / uses for Robots in different industries

Module 5: Getting Started
- Moving the robot by using the "Move" tab
- Knowledge about the I / O Connections and how-to setup
- How to configure the TCP, Payload, and Center of Gravity
- How to navigate the Polyscope GUI

Module 6: Operations and Motion
- Basic knowledge about singularities
- The different movement types and how to use them
  - MoveJ
  - MoveL
  - MoveP
  - MoveC
- How to configure a blend radius
- Configuration of speed and acceleration of movements and individual waypoints
- Apply skills acquired previously to an actual robot
  - Programming a Pick-and-Place application

Module 7: Pick and Place
- Types of Inputs and Outputs (I/O)
- How to wire up I/O
- Building a simple Pick and Place Application
- Understanding Pick, Place, Transit, Approach, and Exit Locations

Module 8: Programming
- Configuration and use of if-else commands
- Basic knowledge about variables
- How to program a subprogram
- Configuration and usage of switch-case commands

Module 9: Palletizing
- Configuration and usage of the palletizing template

Module 10: Features / Planes
- How to create a coordinate system (plane)
- How to program relative to a coordinate system

Module 11: Safety Settings
- Configuration and use of the available safety settings
  - Robot limits
  - Joint limits
  - Safety planes
  - Tool position
  - Direction
  - Configurable Inputs / Outputs
  - Safe Home

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