

FANUC

Assessment Blueprint

FCR-01 FANUC Certified Robot - Operator 1



Test Code: 8597

General Assessment Information

Blueprint Contents

General Assessment Information
Written Assessment Information

Specific Competencies Covered in the Test
Sample Written Items

Test Type: The FANUC FCR-01 national assessment is based on FANUC's industry recognized CERT Program, inclusive of FANUC's Robot Operations, HandlingPRO, HandlingTool Operations and Programming curriculums, Roboguide Simulation Software, and hands-on FANUC robot labs, provided by a FANUC certified academic instructor. Eligible participants can earn certification and an accompanying digital badge.



48.0501 - Machine Tool
Technology/Machinist



13- Manufacturing



51-4011.00 Computer-Controlled Machine
Tool Operators, Metal and Plastic

Written Assessment

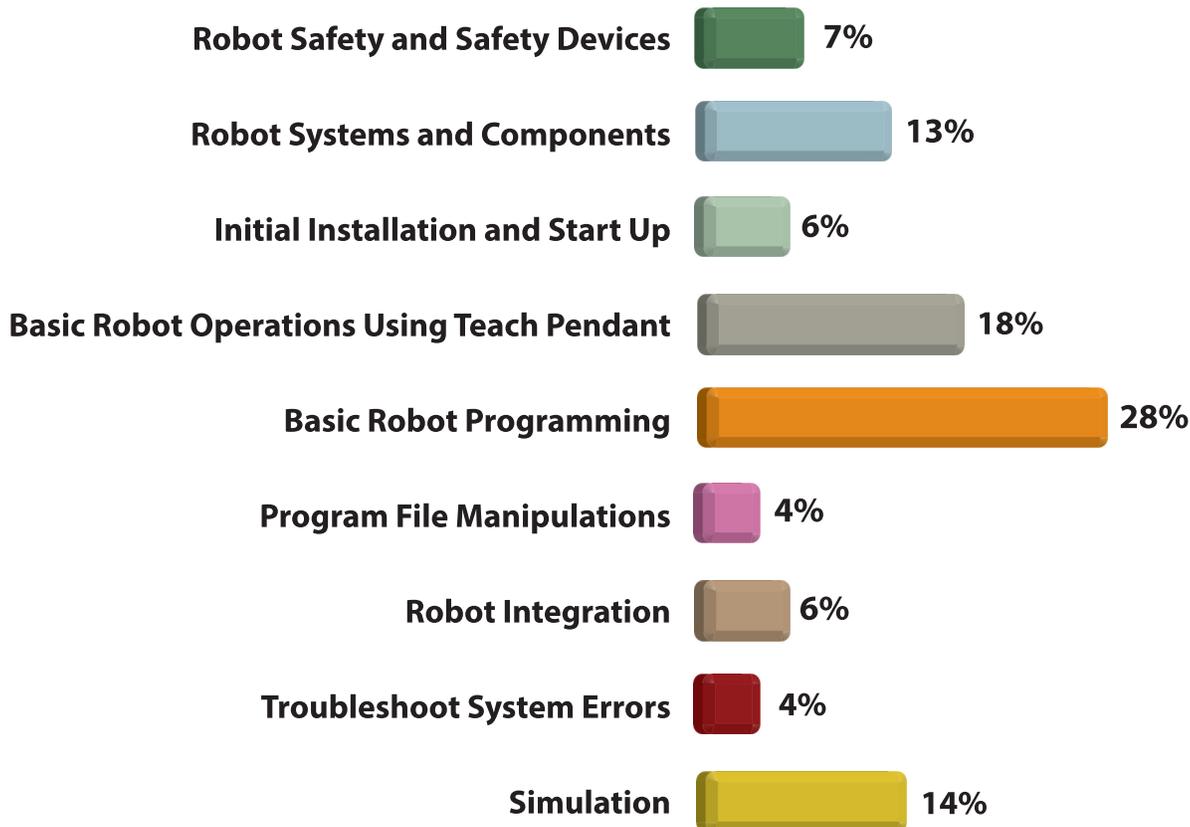
Written assessments consist of questions to measure an individual's factual theoretical knowledge.

Administration Time: 3 hours

Number of Questions: 153

Number of Sessions: This assessment may be administered in one, two, or three sessions.

Areas Covered



Specific Standards and Competencies Included in this Assessment

Robot Safety and Safety Devices

- Demonstrate knowledge of internal robot safety devices and functions
- Demonstrate knowledge of external safety devices

Robot Systems and Components

- Identify teach pendant features and functions
- Demonstrate knowledge of function of robot controller
- Demonstrate knowledge of function of end-of-arm tool (EOAT)
- Demonstrate knowledge of axis configuration and functions

Initial Installation and Start Up

- Prepare robot for installation and start up
- Determine and perform various start up methods
- Perform software setup

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Specific Standards and Competencies (continued)

Basic Robot Operations Using Teach Pendant

- Jog the robot using teach pendant
- Master and re-master robot
- Identify common keys in teach pendant
- Setup robot coordinate frames
- Identify basic error and fault recovery

Basic Robot Programming

- Create various robot programs
- Identify variables to include in motion program
- Plan a motion path
- Program inputs/outputs
- Program non-motion logic structures
- Program macros

Program File Manipulations

- Backup individual and system files
- Restore individual and system files
- Perform image backup and restore

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Specific Standards and Competencies (continued)

Robot Integration

- Establish communication to peripheral devices
- Configure input/output
- Set end-of-arm tool parameters

Troubleshoot System Errors

- Troubleshoot configuration errors
- Troubleshoot dual check safety (DCS) errors

Simulation

- Determine the function and use of simulations
- Demonstrate knowledge of simulation screen layout
- Prepare simulation model robot
- Jog the robot
- Define parts and fixtures in simulation
- Create robot TP program for simulation
- Create a simulation
- Execute simulation program
- Match real cell to Roboguide
- Transfer to and from robot

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Sample Questions

What are two ways to control the robots motion limits/boundaries?

- A. Axis Limits and DCS Position Check
- B. Axis Limits and Collision Guard
- C. DCS Position Check and Safety Fence
- D. Hard Stops and Safety Fence

What is the proper piece of equipment used to delete a program?

- A. controller cabinet
- B. teach pendant
- C. manipulator
- D. servo controller

Which start method allows you to install options and updates?

- A. running start
- B. blank start
- C. cold start
- D. controlled start

What key do you press to change the coordinates to jog into JOINT mode?

- A. COORD Key
- B. MENU
- C. SELECT
- D. NEXT

To restore a position register, which file would be used?

- A. POSREG.sv
- B. NUMREG.sv
- C. FRAMEVAR.sv
- D. DICFGSV.io

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Sample Questions (continued)

Which is NOT an output device?

- A. temperature switches
- B. horns and alarms
- C. stack lights
- D. fans

Which of the following CANNOT be viewed by the program profiler:

- A. segment times
- B. off times
- C. total times
- D. alarm data

To perform a hot start

- A. SHIFT and RESET on Teach Pendant
- B. Unplug and then replug in controller
- C. go into a controlled start and select hot start
- D. SHIFT and COORD

Which hard key do you press to access position registers?

- A. SELECT
- B. DATA
- C. POSN
- D. COORD

For a program to be generated from a collection of targets, the targets must be associated with a

- A. profile
- B. target group
- C. fixture
- D. list