

# 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

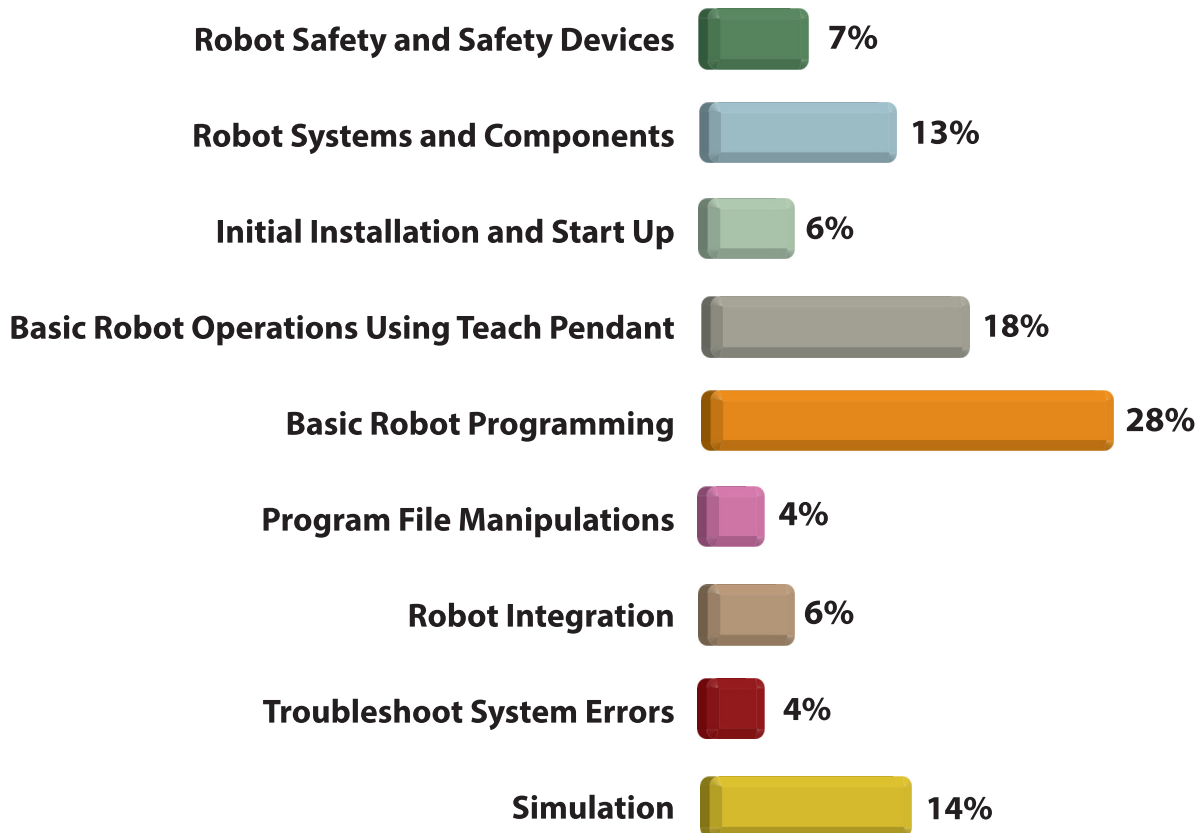
Written assessments consist of questions to measure an individual's factual theoretical knowledge.

**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