

# FANUC

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**FCR-01 FANUC  
Certified  
Robot - Operator 1**

## 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-O1 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

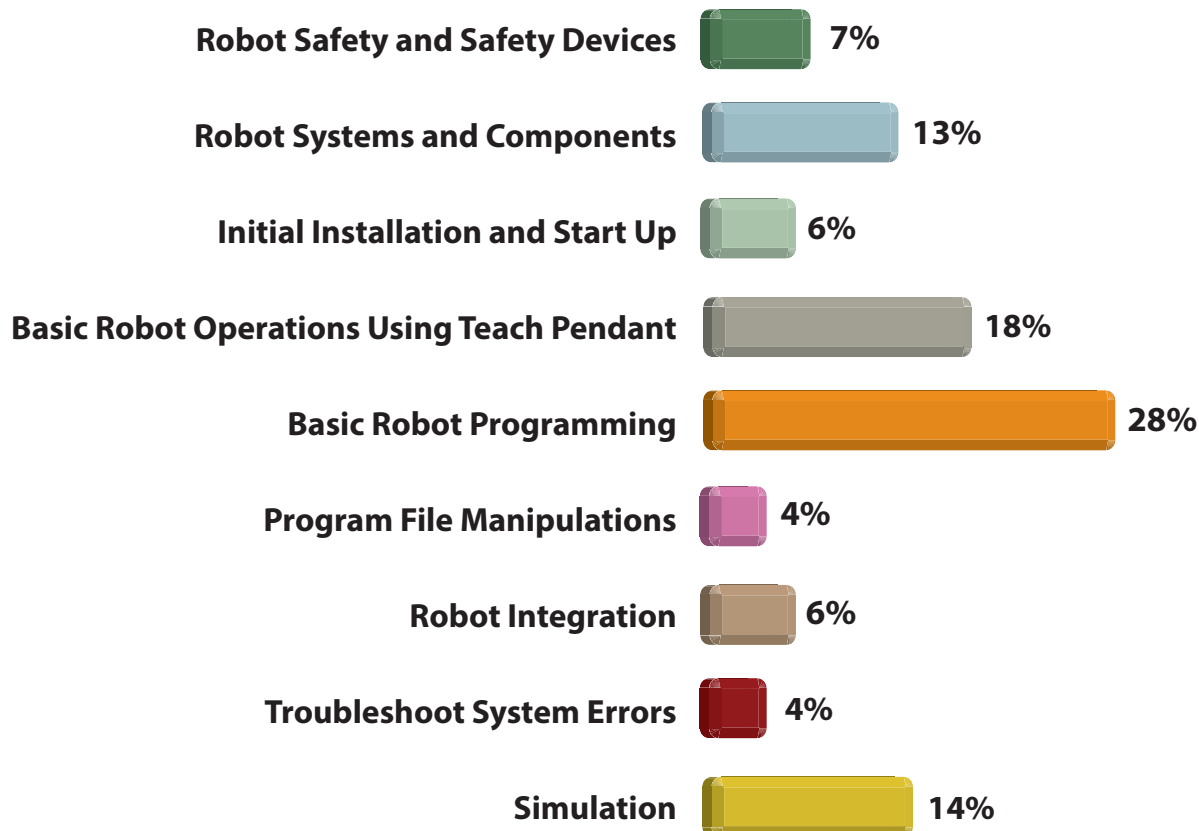
Written assessments consist of questions to measure an individual's factual theoretical knowledge.

**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
- Set up 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 hardwired safety signal allows the operator to enter the workcell while in teach mode and allow motion to the robot?**

- A. emergency stop
- B. safety fence circuit
- C. HOLD
- D. PAUSE

**Singularity error can be corrected by moving**

- A. Joint 1 (+/-) 10 degrees
- B. Joint 2 (+/-) 10 degrees
- C. Joint 3 (+/-) 15 degrees
- D. Joint 5 (+/-) 10 degrees

**Which of the following media is used to load software?**

- A. USB device
- B. RAM
- C. WIFI
- D. Bluetooth

**If the robot arm loses position when power is off, once you power up the robot, you are likely to receive**

- A. A PULSE mismatch alarm
- B. a HOLD alarm that stays on
- C. TP on in auto alarm
- D. robot not at zero alarm

**Which is the correct path to follow in order to assign a Macro?**

- A. Menu - Setup - Type - Macro
- B. Menu - Setup - Type - Frames
- C. Menu - File - Type - Macro
- D. Menu - Data - Type - Macro

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### Sample Questions (continued)

**After performing a restore of an image, which error will likely occur?**

- A. PULSE mismatch
- B. BZAL alarm
- C. BLAL alarm
- D. already locked by another task

**These are electrical signals that enable the controller to communicate with the robot, end-of-arm, and other external devices such as PLC.**

- A. Groups
- B. Deadman Switch
- C. Inputs and Outputs I/O
- D. Teach Pendant

**When a DCS error occurs, what two keys do you press to clear the fault?**

- A. SHIFT & RESET
- B. RESET & ENTER
- C. F1 & F5 keys
- D. PREF & NEXT keys

**To transfer files from the "real" robot to the ROBOGUIDE workcell, use the following EXCEPT?**

- A. Ethernet cable
- B. USB
- C. Compact flash
- D. Bluetooth

**Simulations are used for all of the following EXCEPT**

- A. to analyze motion profile
- B. to perform REACH and RANGE study
- C. to develop applications program
- D. to generate bill material