


## Course Schedule Day 1



**Lab Safety**  
**FANUC Customer Support**  
**Pre-Test**  
**Major Equipment & Component Overview**  
**Robot Overview**  
**Teach Pendants & Functionality**  
**Controller Core Software**  
**Controller Image Backup**  
**Alarms**  
**Single Channel Reset Procedure**  
**Basic Operations**  
**The Position Screen**  
**Changing the i- Pendant Screen Display**  
**The Teach Pendant Function (FCTN) Key**  
**Quick Menus/Full Menus**  
**Utilities Hints Screen Items**  
**Enable/Disable HMI Menus (i- Pendant only)**  
**Introduction to Coordinate Systems**  
**Running a Program Using the Teach Pendant**  
**Stepping Through a Program Using the Teach Pendant**

**Jogging the Robot in Reference to Coordinate Systems**  
**Jogging the Robot**  
**Jogging the Robot in Joint**  
**Jogging the Robot in WORLD**  
**Jogging the Robot in TOOL**  
**Cartesian Coordinate System Frame**  
**Reference While Jogging**  
**Using the Jog Menu**  
**Understanding the Coordinate Systems and the Jog Menu**  
**Naming/Commenting on the Teach Pendant**  
**Tool Frames**  
**Tool Frames Three Point Method**  
**Tool Frames Direct Entry Method**  
**User Frames**  
**User Frames Four Point Method Overview**  
**Running and Stepping Through a Program**  
**Running and Stepping Through a Program Overview**  
**Performing an Abort All**

*CNC Solutions, LLC.*

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## Course Schedule Day 2

**Getting Started with Writing a TP Program**  
**Select Screen Items and Operations**  
**Program DETAIL Screen**  
**Group Mask**  
**Write Protection**  
**Ignore Pause**  
**Programming Lab 1 Create a new program that allows motion Modifying a Program (EDCMD “Edit Command” Soft Key) Displaying Comments on the Teach Pendant Program Screen Inserting Blank Lines and Deleting Instructions**  
**Copy and Paste Instructions**  
**Find Function and Renumbering Positions**  
**Undoing Operations**  
**Remarking Instructions**  
**Motion**  
**Joint Motion**  
**Linear Motion**  
**Circular Motion**  
**Circle Arc Motion**  
**Adding Motion Instructions**  
**Touching up Motion Instructions**  
**Changing the Motion Type**  
**FINE Termination Type**  
**Continuous Termination Type**  
**Corner Region Termination Type**  
**Changing the Termination Type**  
**Programming Lab 2 Use all three termination types**

**Positional Information**  
**Frame Number of Positional Data**  
**Speed**  
**Motion Options**  
**Wrist Joint and PTH Motion Options Acceleration**  
**Override Motion Option**  
**Skip Label Motion Option**  
**Default Motion Instruction**  
**Data Types**  
**Program Logic (INST “Instruction” Soft Key)**  
**Programming Lab 3 Add a counter to the program**  
**Programming Lab 4 Add a timer and general override to the program**  
**Programming Lab 5 Add a message to the program**  
**Programming Lab 6 Add a remark to the program**  
**Programming Lab 7 Add a Wait to the program**  
**Programming Lab 8 Add a PAUSE to the program**  
**Branching Instructions**  
**Programming Lab 9 Use conditional branching**  
**Creating a Basic HOME Program**  
**Programming Lab 10 Create a home program**  
**Reference Positions**  
**Programming Lab 11 Setup a reference position**

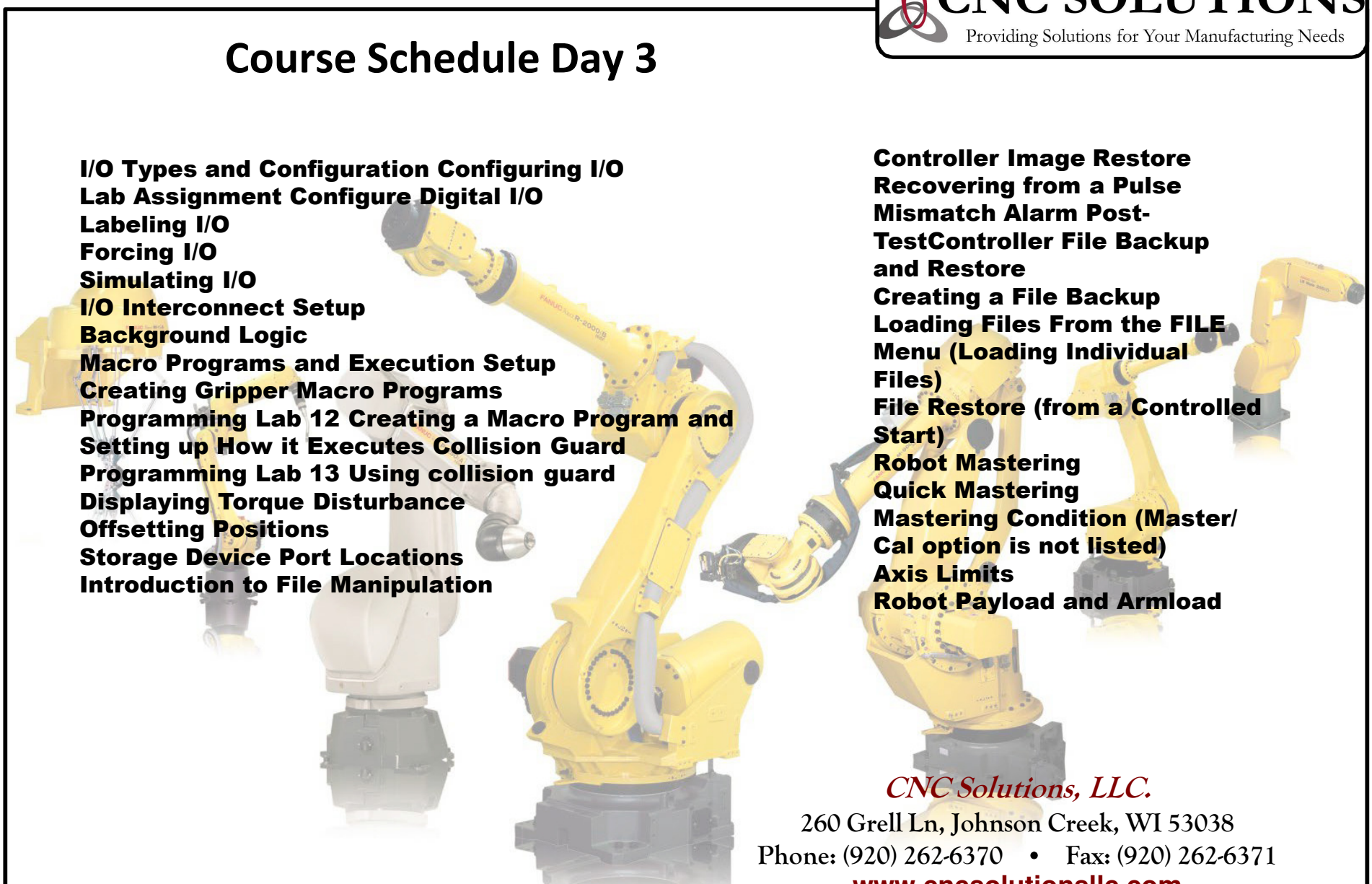
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## Course Schedule Day 3



**I/O Types and Configuration Configuring I/O**  
**Lab Assignment Configure Digital I/O**  
**Labeling I/O**  
**Forcing I/O**  
**Simulating I/O**  
**I/O Interconnect Setup**  
**Background Logic**  
**Macro Programs and Execution Setup**  
**Creating Gripper Macro Programs**  
**Programming Lab 12 Creating a Macro Program and**  
**Setting up How it Executes Collision Guard**  
**Programming Lab 13 Using collision guard**  
**Displaying Torque Disturbance**  
**Offsetting Positions**  
**Storage Device Port Locations**  
**Introduction to File Manipulation**

**Controller Image Restore**  
**Recovering from a Pulse**  
**Mismatch Alarm Post-**  
**TestController File Backup**  
**and Restore**  
**Creating a File Backup**  
**Loading Files From the FILE**  
**Menu (Loading Individual**  
**Files)**  
**File Restore (from a Controlled**  
**Start)**  
**Robot Mastering**  
**Quick Mastering**  
**Mastering Condition (Master/**  
**Cal option is not listed)**  
**Axis Limits**  
**Robot Payload and Armload**

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**Audience:**

This course is intended for people responsible for the setup, programming and production support of systems using a FANUC Robot with an R-J3iB, RJ3iC, R-30iA or R30iB controller with a Handling Tool software package.

**Prerequisites:**

None.

**Course Length:**

Three days (24 hours).

**Class Hours:**

8:00am – 4:30pm

**Class Location:**

CNC Solutions- Technical Training Center  
260 Grell Ln.  
Johnson Creek, WI 53038

**Training Rates:**

Robot Operations & Programming ..... **\$1,800\***

**Contact:**

To schedule training: **Jeff Wojtkiewicz**  
Phone: **(920) 262-6370**  
Email: **jeff.wojtkiewicz@cncsolutionsllc.com**

*\* Note: Pricing is per student. A training manual is provided for each student and is theirs to keep. Lunch is included each day. All seats must be paid in full no later than one week prior to the start of class or the seat will be canceled.*

*There is a four (4) seat minimum to hold the class and a six (6) seat maximum. Any classes canceled by CNC Solutions will be credited back to the customer. Please see discount structure below for multi-student discount. Prices are subject to change without notice.*

**>Discount structure if you send multiple students:**

- Four (4) students sent to same class date: \$6,800.00
- Five (5) students sent to same class date: \$8,200.00
- Six (6) students sent to same class date: \$9,600.00

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