



## ISO Programming Course

**Title:** Advanced Turning Course for Fanuc Controls 16i-T/18i-T/21i-T/3xi.

**Duration:** 5 Days

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Day 1	Start	Finish
	9:00am	4:00pm
<p>General Layout of Machine &amp; Keyboard Explanation Axes Configuration. Program Memory Arrangement How to edit a program and create new Tool Offsets Work Offsets G10 Programmable data input How To Start making a Program. Safe Start. G20-G21 Inch-Metric, G40, etc. G Code Description Type A, B or C. M code descriptions Other addresses explained G98-G99 Feed/rev &amp; Feed/mm. G50-G92 Clamping Maximum Spindle Speeds.</p>		

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Day 2	Start	Finish
	9:00am	4:00pm
<p>G00-G01 Rapid Traverse &amp; Feed Rate Commands. G02-G03 Circular Interpolation using "R", "I" &amp; "K". Absolute &amp; Incremental Programming, "U" &amp; "W". G17-G18-G19 Plane Selection G28 Reference Point return. G30 Setting 2nd, 3rd, 4th Reference Point return. Test piece for G01 - absolute and inc Test piece for G02/G03 - absolute and incremental How To End a Program. M02, M30. M98-M99 Sub-Program use &amp; nesting. G22-G23 Stored Stroke Protected Area. G41-G42 Cutter Compensation, Imaginary Tool Points. G70-G73 Multi-Repetition Cycles. G90-G94 Canned Cycles Roughing, &amp; Facing (if required). G80 - G89 Canned cycles. G96-G97 Constant Surface Speed Control. G32 &amp; G92 Threading Cycles.</p>		

Day 3	Start	Finish
	9:00am	4:00pm
Test Piece 2 (Drill - Rough Bore - Finish) G74-G75 Canned Cycles for Grooving & Drilling. Test Piece 3 (Side Grooving - Face Grooving - Drilling) G32-G92 & G76 Threading Cycles. Test Piece 4 (Rough Turn - Drill - Bore - Thread – Part) C & R Chamfer Corner Radius Function. Test Piece 5 (Turn using direct Drawing) Inputting and Outputting Programs (RS232 / Mem Card) Backup control P/S Alarms Brief Explanation of Macro Programming & uses. (See also Macro Course). Program your own component (if time left)		
Day 4	Start	Finish
	9:00am	4:00pm
Introduction to C Axis and Driven Tooling Cylindrical Interpolation Polar Coordinate Milling Side Canned Cycles Face Canned Cycles Balance Milling Y Axis Milling Thread Milling Sub spindle work		
Day 5	Start	Finish
	9:00am	4:00pm
Wait Codes Multi path functionality Simple Passover Part transfer Spindle Synchronise Balance turning Unloading parts Various examples Soft push torque functions		