



TOYODA

2017

**HMC Programming
Training Syllabus**

BASIC PROGRAMMING

February 20 - 24

May 15 - 19

August 21 - 25

November 6 - 10

ADVANCED PROGRAMMING

May 22 - 24

November 13 - 15

For a Registration Form:

Call Craig Gilsinger at (847) 682-7077

Or Email: cgilsinger@toyoda.com

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2016 PROGRAMMING TRAINING SYLLABUS

Please be aware that the Training Programs at Toyoda Americas Corporation are conducted in both classroom and factory floor environments. On our shop floor, as with most others, there are potential safety concerns and risks. While not being what is considered a heavy industrial factory, the safety of our employees, guests, and customers is very important to Toyoda Americas. Consequently, all students are required to wear long pants and closed toe shoes at all times. Your cooperation is expected and appreciated.

SYLLABUS FOR BASIC PROGRAMMING CLASS

Basic Operation of Machine

1. Perform a machine walk around. Review operator and pallet change area, emergency stops, door interlocks, oil / air supply, coolant tank, and electrical cabinet. Review some basic daily maintenance functions
- 2: Proper power up and down of machine
- 3: Explain and demonstrate machine operator panel, pallet changer and tool magazine panels
- 4: Explain and demonstrate all Fanuc control screens and functions i.e., position screens, program screens, offset screens
- 5: Perform Manual Data Input functions
- 6: Setup the machine in Auto-Cycle mode
- 7: Troubleshoot some basic machine function problems i.e., tool changer and pallet changer hang-ups

Programming

1. Review in detail all M codes, G codes and canned cycles
- 2: Review the machine tooling manual
- 3: Demonstrate standard options
- 4: Explain and demonstrate work offsets and tool offsets
- 5: Explain program format, write basic programs and debug programs at the machine
- 6: Perform program editing, copying, and merging on the control
- 7: Perform program editing, copying, and merging on the control

Advanced Operations

- 1: With time scheduled in advanced with the Instructor, a demonstration of purchased control functions or advanced options is possible.

Class Schedule

Monday 8:30 am - 5:00 pm

Tuesday 8:30 am - 5:00pm

Wednesday 8:30 am - 5:00 pm

Thursday 8:30 am - 5:00pm

Friday 8:30 am - 12:00 pm

SYLLABUS FOR ADVANCED PROGRAMMING CLASS

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Programming

1. Detailed explanation of local, common and machine system variables
- 2: Detailed review of the custom macro section of the Fanuc Programming manual
- 3: Demonstrate the use of local and common variables used in counters and custom canned cycles
- 4: Demonstrate the uses for machine system variables such as capturing time and date, tool position, machine position, sending operator alarm messages. Explain where these features might be practical in day to day machine operation
- 5: Detailed review of probe setup and probing macros. Each student will have machine time using probe calibration, bore centering, single axis probing
- 6: Explanation of the custom macro format
- 7: Write and debug simple macro programs

Class Schedule

Monday 8:30 am - 5:00 pm

Tuesday 8:30 am - 5:00 pm

Wednesday 8:30 am - 12:00 pm

Note:

If you have a specific project you would like to work on bring it to class.