

# OKUMA

## Electrical Maintenance for Lathes and Machining Centers with the OSP-P200 series control.

Course Code : EL 902

**Prerequisite: None**

Credits: 3.2 CEU

**Course length: 4.5 days**

Class Size: 6 persons

**COURSE OBJECTIVES - Upon completion, the individual will be proficient in all basic skills necessary to troubleshoot an electrical side problem on any Okuma CNC machine tool with the OSP-P200 control.**

**The course is designed to provide the information needed to diagnose any machine problem. The individual will be capable of diagnosing a problem and be able to communicate via the phone to Okuma service representatives if the need arises for further assistance.**

**Course emphasis is a blend of classroom instructional theory and “hands on” time spent on the machine tool.**

**Comprehension of the topics is measured by actual demonstration. Distributors will be required to take a written test.**

**COURSE REGISTRATION - please contact Von Robertson at (803-981-7000) the Institute for Manufacturing Productivity to obtain program availability dates, or check our website <http://imp.okuma.com>**

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## Course Outline

MONDAY	SECTION
1. Instructor and Class Introductions	
2. Safety	One
3. Okuma Documentation	Two
4. Machine Definition	Three
A) Introduction to CNC machines	
5. Machine Operation	Four
A) CNC Operation Panel and Functions.	
B) Machine operation panel and Functions.	
6. Schematics	Nine
A) Symbols	
B) How to read Okuma Prints	
TUESDAY	
1. Construction	Five
A) Power Supplies	
B) Printed Circuit Board Functions	
C) Device Net	
D) Motion Control System	
a) Axis Drives	
b) Spindle Drives	
c) Power Supplies	
d) J type Encoder	

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**Course Outline**  
(Continued)

WEDNESDAY	SECTION
1. Construction (Continued) E) Replacing Absolute Position Encoders a) Machining Center b) Lathe	Five
2. Diagnostics A) Numbering System B) System Start Up C) Alarm Format	Six
THURSDAY	
1. Diagnostics (Continued) D) I/O Monitor E) MAC MAN F) PLC Ladder	Six
2. Parameters A) Machining Center B) Lathe	Seven
FRIDAY	
1. Software	Eight