

Machine Trade Skills

**Read the mechanical blueprint
and know you can make it!**

A six-day course to prepare you to machine practically anything

Most people never even wonder how their new car, or golf club, or knee replacement, or whatever, came into being. They just accept that all the parts will do whatever they're supposed to do. That's the machine trade job – creating all the bits and pieces so they will go together, stay together and work together for a good long time—and the end-user never even needs to give it a thought. That's quite a skill set.

Who Should Attend

Those serious about gaining the multiple skills required by the machine trade.

What You Will Learn

Reading mechanical blueprints: to read and interpret a mechanical part drawing and an assemble drawing, recognizing the shape. Also using an assembly drawing and parts list, correctly identify and list the parts to assemble the components.

Geometric dimensioning and tolerancing: to confidently assess and discuss issues that arise from GD&T when applied to engineering drawings. Competence to achieve GT&T verification through practical application of measurement.

Precision measurement (Metrology): to achieve Imperial to metric conversion with and without calculators; identify and describe measurement tools used in the trade; use outside micrometers, verniers, calipers, dial indicators, gauge blocks, inside and depth micrometers, telescoping gauges, radius gauges; identify surface finish requirements.

Machine Shop: to safely set up and operate engine lathe, drill press, vertical mills, surface grinder, band saw to do basic machining operations. E.g. turning, boring, grinding, tapping, keyway cutting, broaching, sizing, interpreting prints, measuring, fitting, speeds and feeds.

Introduction to CNC Concepts: to identify type of machine, location of axis and type of controller; communicate more effectively with Engineering regarding equipment and production issues; understand the interface between CAD,

CAM and Operator Effectiveness; explain the various G and M codes as they appear on the operating screen.

Consumable Tooling: to identify inserts, drills and taps used in the machine trades; identify their application and appropriate usage; identify appropriate costs for inserts.

Trade calculations (conversions): to use arithmetic as a tool in the field; understand and use proper order of operations when implementing formula calculations; converting metric to inch and inch to metric.

Course Content

Working from the basics on up to hands-on practice to learn: reading and interpreting blueprints; materials; tools; measurements and calculation; computer-aided principles; grinding and finishing

Prerequisite

none

Your Facilitator

Terry Cox is president and founder of CAM Solutions. He is a general machinist with over 20 years of experience in facility support, R&D, and developing new product information. He has established an outstanding reputation in CNC programming, working to blueprints and close tolerances, creating new product prototypes, and machine repair.



Skills that WORK.

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