

## **Basic G – Code and Cartesian Coordinate System: 30 hours:**

- Cartesian Coordinate system
- Define points on a grid
- Program zero
- Z zero
- Difference between vertical and horizontal mills
- Parts of a circle, circumference, radius
- G – Codes
- G00
- G01
- G02
- G03
- G04
- Canned cycles
- Tool codes
- Tool length offsets
- Cutter comp. G41, G42
- M Codes
- Modal, non modal G and M Codes
- Incremental and absolute programming
- Sample programs
- Setting program zero on the machine
- Jog, edit, mdi, auto, and single block modes
- Feed rate override, spindle override

Students write a program and run it on the laser