

## Computer Numerical Control (CNC) Programming Course 76 hrs.

### Course Description:

Students will better understand CNC Programming and how it is applied to modern manufacturing. Students will learn CNC Programming including G-code/M-code, cutter selection, speeds and feeds for materials and other relevant techniques and processes. Topics Include:

- Understanding Cartesian Coordinates and how they relate to toolpath programming
- Knowledge of Workholding
- Use of measuring tooling: micrometers, calipers (digital/dial), bore gauges, etc.
- Learning Back-plotting Software for writing and verifying tool paths (**Cimco Edit 7**).
- Simple point-to-point and Complex toolpath programming – usage of G & M codes in creating a program
  - G-codes for Axis Movement
  - More complex G-code programming
  - G-codes for Machine Setup
  - Common speed and feed for materials
  - G-codes/Canned Cycles for Hole Making and Milling
  - Axis Position Addresses
  - M-codes for Machine Functions
  - Additional Addresses

### Prerequisites:

Ability to read Blueprints and able to use common measuring tools such as micrometers, calipers, etc. Some prior machining experience helpful.

**ETI Instructor Paul Montgomery** has more than 30 years' experience in manufacturing, specializing in CNC mill and lathe programming, set-up and operation, CAM programming, CAD design with SolidWorks and CATIA, manual machining in a prototype/tool making capacity with expert level on all manual engine lathes and other related machining equipment and tools. In addition, Paul is an experienced instructor and has been manager of training and development for a major aerospace manufacturing company. Paul continues to create and deliver engaging and effective training programs in most machining topics.

**Employment Training Panel – State Funded Training \*\$350.00**

**Non-ETP Cost: \$2,222.00**

**WHEN:**

**Wednesdays**

**Feb. 20, 2019 – June 26, 2019**

**5:00 pm to 9:00 pm**

**WHERE:**

**Center for Applied Competitive  
Technologies\_housed at Aerospace  
Dynamics Intl.**

**25571 Rye Canyon Rd. Santa Clarita, CA**

**For more information or to register, please contact Jocey Hogan  
at 661.362.5657 or [jocey.hogan@canyons.edu](mailto:jocey.hogan@canyons.edu)**

\*For employees of eligible employers. Employees are not considered registered until all paperwork is received, and participant fee for each trainee has been paid to the Santa Clarita Community College District, and the Employment Training Panel has determined eligibility. State subsidy is contingent upon the trainee completing all the Employment Training panel requirements. Please contact the Employee Training Institute, 661.362.5657, for details on eligibility requirements.