
Appendix A

TOOL PROGRAMMER (CNC)

WORK PROCESS SCHEDULE

AND

RELATED INSTRUCTION OUTLINE



Appendix A

WORK PROCESS SCHEDULE TOOL PROGRAMMER (CNC)

O*NET-SOC CODE: 51-4012.00 **RAPIDS CODE:** 0690CB

This schedule is attached to and a part of these Standards for the above identified occupation.

1. APPRENTICESHIP APPROACH

☐ Time-based ☒ Competency-based ☐ Hybrid

2. TERM OF APPRENTICESHIP

The term of **Tool Programmer (CNC)** is **Competency Based** supplemented by the minimum required 144 hours of related instruction per year.

3. RATIO OF APPRENTICES TO JOURNEYWORKERS

The apprentice to journeyworker ratio is: **1** Apprentice(s) to **1** Journeyworker(s).

4. APPRENTICE WAGE SCHEDULE

Apprentices shall be paid a progressively increasing schedule of wages based on either a percentage or a dollar amount of the current hourly journeyworker wage rate, which is: **\$29.22**/per hour.

Period	Wage (Hourly)	Description
1	16.00	6 months + hours
2	16.50	6 months + hours
3	17.00	6 months + hours
4	17.50	6 months + hours
	18.00	6 months + hours
	18.50	6 months + hours

5. PROBATIONARY PERIOD

Applicants selected for apprenticeship will serve a probationary period of **1500** Hours.



6. SELECTION PROCEDURES

Applicants will be selected by individual participating employer sponsors using selection method #4, as outlined in the California Code of Regulations, Title 8, Chapter 2, Part 1, Section 215, Chapter 6, from a pool of eligible created during the established recruiting process in accordance with the State and Federal Equal Opportunity regulations.

1. Minimum age of all applicants shall be 16 years. There is no maximum age;
2. Educational prerequisite for entry: High school diploma or GED/equivalent;
3. Physical prerequisites: Applicant must have the ability to safely perform the work of the trade/occupation. Physical examination required for entry is at no cost to the applicant and the physical exam will be defined by the individual employersponsor.
4. Written Test: Administered by Faculty and/or Program Coordinator
5. Oral Interview: None Required
6. All applicants will be notified in writing of Acceptance or Rejection.
7. If rejected, reasons for rejections will be stated.
8. A pool of applicants will be established and maintained for two years as follows:
 - a. Interested applicants will have an opportunity to attend a publicorientation and enroll in the program's employment preparation course. Completers of the course will be guided through the development of a resume and job application, which will be published to participating employer partners.
9. And applicants will be employed as follows:
 - a. Applicants will follow directives of individual employer partners through job application, interview and pre-screening.
 - b. Applicant's prior work experience and training will be evaluated by the committee at the time of registration, and appropriate credit will be given toward a higher apprenticeship and/or wage bracket. Apprentice applicant must verify, in writing, all past experience/education for consideration of credit.
 - c. Each participating employer sponsor, upon determination of the need to employ and train an apprentice, will register an apprentice after upholding a fair and consistent sourcing, recruiting, and evaluation process;
 - d. Participating employer sponsors will report recruitment and selection data annually to the Program Name Apprenticeship Training Program coordinator/director;
 - e. Minimum age of all applicants shall be 16 years. There is no maximum age;
 - f. Educational prerequisite for entry: High school diploma or GED/equivalent;
 - g. Physical prerequisites: Applicant must have the ability to safely perform the work of the trade/occupation. Physical examination required for entry is at no cost to the applicant and the physical exam will be defined by the individual employer sponsor.
 - h. Drug screening prior to employment, as well as random drug screening throughout the apprenticeship program may be required for selection and/or continued participation/employment;
 - i. General aptitude or other skills test shall be defined by the individual employer sponsor and administered by the employer sponsor or its delegated agent;
 - j. Oral interview is per employer sponsor's individual selection procedures with selection documentation to be on file with the Program Name program director/coordinator.



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Work Processes and Skills		
Competencies	Date Completed	Initial
A. Write programs in the language of a machine's controller and store programs on media such as punch tapes, magnetic tapes, or disks.		
B. Determine the sequence of machine operations and select the proper cutting tools needed to machine workpieces into the desired shapes.		
C. Revise programs or tapes to eliminate errors, and retest programs to check that problems have been solved.		
D. Analyze job orders, drawings, blueprints, specifications, printed circuit board pattern films, and design data to calculate dimensions, tool selection, machine speeds, and feed rates.		
E. Write instruction sheets and cutter lists for a machine's controller to guide setup and encode numerical control tapes.		
F. Observe machines on trial runs or conduct computer simulations to ensure that programs and machinery will function properly and produce items that meet specifications.		
G. Enter computer commands to store or retrieve parts patterns, graphic displays, or programs that transfer data to other media.		
H. Modify existing programs to enhance efficiency.		
I. Determine reference points, machine cutting paths, or hole locations, and compute angular and linear dimensions, radius, and curvatures.		



RELATED INSTRUCTION OUTLINE TOOL PROGRAMMER (CNC)

O*NET-SOC CODE: 51-4012.00 RAPIDS CODE: 0690CB

Through consultation with the Apprenticeship Committee and the indenturing employer, apprentices will select an applicable program of study/course track and complete a minimum of 144 hours of related instruction per year of apprenticeship. Courses will be approved by the Apprenticeship Committee and made available to applicable apprentices by approved education providers/institutions. Apprentices will enroll in, and complete, the required coursework that satisfies the minimum requirements of the program. Prior applicable education and training will be credited towards completion of related education requirements and apprentices will be offered tracks advancing their technical aptitude in the profession.

Source: Norco College

The following related training outline identifies the courses that are currently identified as suggested course work for this occupation:

- Computer Aided Drafting – 108 hours
- Solid Works I – 108 hours
- Blueprint Reading – 54 hours
- Geometric Dimensioning and Tolerancing – 90 hours
- Math Engineering Technology – 54 hours
- Computer Aided Manufacturing – 144 hours
- OSHA Standards for General Industry – 18 hours
- CNC Machine Set-up and Operations – 108 hours
- CNC Program Writing – 90 hours



Appendix A = Work Process Schedule and Related Instruction Outline by LAUNCH Apprenticeship Network, Department of Labor (DOL) – Apprenticeship Building America (ABA) Grant, FoundationCCC is licensed under CC BY 4.0.

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