

Engineering Assistant	<i>O*Net Code</i>	<i>RAPIDS Code</i>
	17-3027.00	0777CB

Section 1 – On-the-Job Learning (Work Experience) 29 CFR § 29.5(b)(3)

1. During the Apprenticeship, the Apprentice shall receive work experience and Related Training Instruction in all phases of the occupation, including safe work practices, necessary to develop the skill and proficiency of a skilled professional.
2. The program sponsor or its designated apprenticeship committee must ensure Apprentices are rotated throughout the various work processes to ensure a well-rounded professional upon completion of the Apprenticeship, and identify what methodology will be used to track progression of experience on-the-job.
3. Such on-the-job training shall be carried on under the direction and guidance of a qualified professional.

The following identifies the major work processes in which Apprentices will be trained.

Apprenticeship Competencies – Technical

The below on-the-job-learning (OJL) work process competencies are intended as a guide. It need not be followed in any particular sequence, and it is understood that some adjustments may be necessary in the hours allotted for different work experience. In all cases, the apprentice is to receive sufficient experience to make them fully competent and use good workmanship in all work processes, which are a part of the trade. In addition, the apprentice shall be fully instructed in safety and OSHA requirements.

Ratings are:

Demonstrates Fundamentals – Apprentice can perform the task with some coaching.

Proficient in Task – Student should be able to complete the task without a mentor or supervision to the business standards.

Completion Date – Date apprentice completes final demonstration of competency.

Apprentices need to be “proficient in task” in each category, by each of their nine month reviews during the apprenticeship in order to be considered for any merit increases or to have successfully completed the apprenticeship. **The evaluation will be conducted in accordance with the employer’s competency-based performance evaluation system.**

Apprentice Name: _____

Start Date _____

		Place a check mark in the box when complete.			
Design		Field Training	Demonstrates Fundamentals	Proficient in Task	Completion Date
1.	Able to effectively review blueprints, specifications and other documentation in preparation for production				
2.	Able to complete detailed design of materials, geometry, fits, tolerances, and instructions on dimensional drawings for new and modified parts/assemblies using 3D CAD software				
3.	Communicate with quoting department to ensure correct material and minimize lead time needed to process work orders on all new part quotes				
4.	Demonstrate ability to maintain notes, design calculations and other documentation (bill of materials, list of design				

	parameters and performance standards,) for future reference using the departmental filing guidelines				
5.	Able to revise and update existing drawings to reflect design changes in collaboration with engineers, designers, and/or requestors				
6.	Able to follow through project execution with machine shop, welding, assembly, and any other necessary departments				
	Manufacturing	Field Training	Demonstrates Fundamentals	Proficient in Task	Completion Date
7.	Able to perform basic machining processes accurately within specified tolerances				
8.	Able to create and test prototypes and/or new parts for existing machines				
9.	Demonstrate ability to consistently and correctly assemble machine components, sub-assemblies, nests and gauges independently				
10.	Demonstrate knowledge of welding and basic machine safety				
11.	Able to suggest improvements to current production models and processes				
12	Able to effectively estimate time, cost, and quality for projects including fabrication of individual components/assemblies and making simple machine modifications.	Field Training	Demonstrates Fundamentals	Proficient in Task	Completion Date
12.	Demonstrate knowledge of LEAN manufacturing by implementing its principles throughout projects				
	Quality/Measurements	Field Training	Demonstrates Fundamentals	Proficient in Task	Completion Date
13.	Demonstrate proficiency in the use of precise measurement equipment such as calipers, micrometers, etc.				
14.	Able to inspect machined and purchased components to ensure quality				
15.	Able to evaluate components and processes to identify opportunities for improvements in quality and reliability.				
	Mechanical	Field Training	Demonstrates Fundamentals	Proficient in Task	Completion Date
16.	Able to correctly troubleshoot and repair various mechanical problems				
17.	Able to select proper mechanical components for a given application				
18.	Demonstrate ability to correctly perform preventative maintenance procedures on existing equipment.				
	Electrical	Field Training	Demonstrates Fundamentals	Proficient in Task	Completion Date
19.	Able to correctly troubleshoot & repair various electrical problems				
20.	Demonstrate ability to read and write electrical schematics and modify electrical control boxes.				
21.	Demonstrates knowledge of electrical standards and codes				
22.	Demonstrate ability to select, install, and wire standard industrial control components according to project requirements and design intent with minimal support from an electrical designer or engineer				
23.	Demonstrate ability to select proper electrical components for a given application. Able to evaluate				

	several options based on technical information and make an informed decision.				
24.	Able to correctly maintain existing equipment				
	Miscellaneous	Field Training	Demonstrates Fundamentals	Proficient in Task	Completion Date
25.	Demonstrate ability to adapt to new technologies through formal training, seminars, publications, mentoring, and/or self-teaching				
26.	Demonstrate ability to utilize tools such as Gantt charts, risk analysis, network diagrams, workflow tools, etc. for project management purposes				
27.	Able to utilize basic computer programs (Word, spreadsheets, PowerPoint, etc.) to effectively organize, compute, and present information				
28.	Demonstrate ability to communicate professionally with peers and mentors to obtain feedback, document the interactions, and implement recommended changes				
29.	Able to identify personal strengths that can benefit a problem-solving team				
30.	Understand the significance of teamwork and communication				

Date Completed: _____

Apprentice: _____

Mentor: _____

Supervisor: _____

Career Academy of Pella: _____

Apprenticeship Competencies – Behavioral

In addition to mastering all of the essential technical competencies, an apprentice must consistently demonstrate at an acceptable level the following behavioral competencies in order to complete the apprenticeship.

Ratings are:

- (4) Exceeds targets; (3) Consistently achieves targets; (2) Meets some targets;
- (1) Not meeting targets; or (N/A) Not applicable.

Apprentices need to receive at least a "3" ranking in each category, by each of their nine month reviews during the apprenticeship in order to be considered for any merit increases or to have successfully completed the apprenticeship. **The evaluation will be conducted in accordance with the employer’s competency-based performance evaluation system.**

Apprentice Name: _____

Ranking

Item #	Behavioral Competencies	4	3	2	1	N/A
1.	Participation in team discussions/meetings					
2.	Focus in team discussions/meetings					
3.	Focus during independent work					
4.	Openness to new ideas and change					
5.	Ability to deal with ambiguity by exploring, asking questions, etc.					
6.	Knows when to ask for help					
7.	Able to demonstrate effective group presentation skills					
8.	Able to demonstrate effective one-on-one communication skills					
9.	Maintains an acceptable attendance record					
10.	Reports to work on time					
11.	Completes assigned tasks on time					
12.	Uses appropriate language					
13.	Demonstrates respect for customers, co-workers and supervisors					
14.	Demonstrates trust, honesty and integrity					
15.	Requests and performs work assignments without prompting					
16.	Appropriately cares for personal dress, grooming and hygiene					
17.	Maintains a positive attitude					
18.	Cooperates with and assists co-workers					
19.	Follows instructions/directions					
20.	Able to work under supervision					
21.	Able to accept constructive feedback and criticism					
22.	Able to follow safety rules					
23.	Able to take care of equipment and work place					
24.	Able to keep work area neat and clean					
25.	Able to meet supervisor’s work standards					
26.	Able to not let personal life interfere with work					
27.	Adheres to work policies/rules/regulations					

Date Completed: _____

Supervisor/Trainer: _____

Applicants shall meet the following minimum qualifications:

1. **Age:** Shall be at least 16 years of age.
2. **Education:** Can only enter registered apprenticeship in the junior year. Currently enrolled in Engineering Assistant Welding classes at Career Academy of Pella or previously enrolled.
3. **Physical/Mental:** Shall be physically capable of performing the essential functions of the occupation without endangering the health and safety of themselves and/or fellow workers. Applicants shall be allowed to request reasonable accommodation for a disability to meet this standard when applicable.
4. **Other:** Applicants will be drug free and agree to submit to random drug testing.
5. **Other:** Shall have parental consent if below the age of 18.

Section 3 – Term of Apprenticeship

29 CFR § 29.5(b)(2)

1. The term of Apprenticeship shall be a period of reasonably continuous employment, including the probationary period as stated on this “Trade Schedule” attached to and made a part of these Standards; plus the required hours per year of related education.
2. The program is premised on competencies demonstrated in lieu of time considerations. However, Title 29, CFR Part 29 requires that time considerations be addressed in the Standards.
3. The term of apprenticeship shall be no less than 2000 hours of reasonably continuous employment and training on the job, supplemented by the required minimum 144 hours of job related education.
4. An Apprentice, who, by exceptional aptitude or as a result of past education and/or practical experience, achieves the desired level of competency in a phase of the Apprenticeship Program in less than the time designated or illustrates existing competency on the initial assessment, may be advanced to the appropriate level.

Section 4 – Probationary Period

29 CFR §§ 29.5(b)(8) and 29.5(b)(20)

1. The first 500 hours as a registered apprentice shall be considered a Probationary Period if the apprentice is a new hire, as consistent with Career Academy of Pella policy.
2. During the probationary period either the apprentice or the Sponsor may terminate the Apprenticeship Agreement, without stated cause, by notifying the other party in writing. The records for each probationary apprentice will be reviewed prior to the end of the probationary period. Records may consist of periodic reports regarding progression made in both the OJL and related instruction, and any disciplinary action taken during the probationary period.
3. Any probationary apprentice evaluated as satisfactory after a review of the probationary period will be given full credit for the probationary period and continue in the program.
4. After the probationary period the Apprenticeship Agreement may be canceled at the request of the apprentice, or may be suspended or canceled by the Sponsor for reasonable cause after documented due notice to the apprentice and a reasonable opportunity for corrective action. In such cases, the Sponsor will provide written notice to the apprentice and to the Registration Agency of the final action taken.