



**PEASLEE  
TECH**

Developed by

Dwayne Peaslee Technical Training Center

For the occupation of **Mechatronics Technician**

**O\*NET Code: 49-2094.00**

Developed in Cooperation with the  
U.S. Department of Labor - Office of Apprenticeship

Registered with the  
State Apprenticeship Agency

**Registration Number**

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**Apprenticeship Program Manager**

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**Provisional  
Approval Date**

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**Apprenticeship Program Manager**

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**Final  
Registration Date**

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# STANDARDS OF APPRENTICESHIP

## APPLICATION

This Application for Approval of Standards of Apprenticeship  
is hereby officially submitted for approval to the  
Kansas Department of Commerce-Kansas Apprenticeship Council

on this **2nd** day of **August 2019**

**By signing this document, I certify that I or someone in my employ  
has the necessary experience, license(s) and certification(s)  
to conduct training in this occupation.**

Dwayne Peaslee Technical Training Center  
2920 Haskell Avenue, Lawrence, KS 66046

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Employer or Company (Sponsor)



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August 2, 2019  
Signature and Date

Executive Director

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Title

## DEFINITIONS

EMPLOYER/ COMPANY	shall mean Dwayne Peaslee Technical Training Center (sponsors representative)
APPRENTICESHIP AGREEMENT	shall mean a written agreement between the employer and apprentice; each agreement shall contain a clause, which makes these standards a part of such agreement with the same effect as if expressly written therein.
APPRENTICE	shall mean an individual who has applied for and been accepted for an apprenticeship to learn the trade of <b>Mechatronics Technician</b> , outlined in these standards, and who, with the employer, has a written apprenticeship agreement.
REGISTRATION AGENCY	shall mean the Kansas Department of Commerce – State Apprenticeship Office.
STANDARDS OF APPRENTICESHIP	shall mean this entire document, including these definitions.

## TERM OF APPRENTICESHIP PROGRAM

The term of apprenticeship, which for an individual apprentice may be measured either through the completion of the industry standard for on-the-job learning (at least 2,000 hours) (time-based approach), attainment of competency (competency-based approach), or a blend of the time-based and competency-based approaches (hybrid approach).

The **time-based approach** measures skill acquisition through the individual apprentice's completion of at least 2,000 hours of on-the-job learning as described in a work process schedule.

The **competency-based approach** measures skill acquisition through the individual apprentice's successful demonstration of acquired skills and knowledge, as verified by the program sponsor. Programs utilizing this approach must still require apprentices to complete a minimum of 2,000 hours or one (1) year of on-the-job learning. The program standards must address how on-the-job learning will be integrated into the program, describe competencies, and identify an appropriate means of testing and evaluation for such competencies.

The **hybrid approach** measures the individual apprentice's skill acquisition through a combination of specified minimum number of hours of on-the-job learning and the successful demonstration of competency as described in a work process schedule.

This program will utilize the **hybrid-based** approach. The term of apprenticeship shall be **6,000 hours** of reasonably continuous employment, including the probationary period, plus a minimum of 144 hours of related technical instruction each year of the term. In the event the apprentices are required to work overtime, they shall receive credit on the term of apprenticeship for only the actual hours worked.

The apprentice's progress in each phase of apprenticeship may be determined on the credited hours. Therefore, an apprentice who, by unusual aptitude and industry, or because of past education and/or practical experience, achieves the desired level of attainment in one phase of the apprenticeship in less than the time designated, may be advanced to the next phase. The determination of such achievement in less than the usual scheduled hours shall be made by the employer.

The employer intends and expects to give the apprentice continuous employment. However, the employer reserves the right to suspend the apprentice whenever conditions of business make that necessary. Any

apprentice whose term of apprenticeship is suspended for such reason will be given the opportunity of reemployment before an additional apprentice is employed.

## WORK EXPERIENCE

The apprentice shall be taught the use, care and effective handling of all tools and equipment commonly used in the occupation. The apprentices shall be given work experience and training in the occupation to assure them the skill and proficiency that characterizes a qualified journey worker/mentor as herein defined. Such on-the-job learning (OJL) shall be carried on under the direction and guidance of a qualified journey worker/mentor in the occupation.

The workday and workweek for apprentices, and the conditions associated therewith, shall be the same as those of other classifications of employees within the company doing comparable work.

A schedule of work processes to be included in this training is attached hereto.

## RELATED TECHNICAL INSTRUCTION

All apprentices shall be required to attend classes in subjects related to the occupation. One hundred forty-four (144) hours per year is normally considered necessary. These classes may be given during or outside the regular working hours, depending upon available facilities. All time spent in such classes after regular working hours shall not be considered as hours of work. If required to attend classes during the regular working hours, the apprentices shall be compensated at their regular hourly rate. If, for any reason, classroom instruction is not practicable, the related technical instruction may be conducted by means of distance learning, correspondence, electronic, or company-sponsored courses approved by the Registration Agency.

The amount of time to be devoted to each subject and the sequence they are to follow will depend upon the type of work being performed by the apprentice. It is intended that this classroom instruction shall be so integrated with the work that the apprentice and the company will receive the maximum benefits from such instruction.

Failure on the part of the apprentice to fulfill their obligation as to the related training studies and/or attendance, or their failure to maintain passing grades therein, shall constitute adequate cause for cancellation of their apprenticeship agreement.

An outline of the related technical instruction to be included in this training is attached hereto.

All related technical instruction Instructors must meet the State education requirements for a vocational-technical instructor in Kansas, or be a subject matter expert, which is an individual, such as a journey worker/mentor, who is recognized within an industry and by the employer as having expertise in this occupation.

## WAGE SCHEDULE

The apprentice shall be paid for each hour spent on the job at the following progressively increasing schedule of wages typically established on a percentage of the prevailing journey worker/mentor wage for the occupation. When the wages and full fringe benefits for the apprentices are established pursuant to Federal and State Statutes and Regulations, the applicable wages and full fringe benefits must be paid. The wages below are the minimum for participating companies. Period 1 is the minimum initial wage, period 2 is at the end of the first-year minimum wage and period 3 is the minimum journey worker wage.

25. a. Term: <input type="checkbox"/> Traditional Competency <input checked="" type="checkbox"/> Hybrid 4,000 hours	Period 1	2
	0-5,999	6,000
b. Wage Rate % <input type="checkbox"/> or \$X	\$20.89	\$25.49

(NOTE: At no time may the apprentice's wage rate be less than that required by any minimum wage law which may be legally applicable.)

The journey worker/mentor minimum wage rate as of **August 2, 2019** is **\$25.49** per hour.

## PERIODIC EXAMINATIONS

After the probationary period and before each period of advancement, or at any other time when conditions may warrant, the employer or an authorized representative may examine the apprentices to determine whether they have made satisfactory progress. If the apprentices' related training or work progress is found unsatisfactory, they may be required to repeat a process or series of processes in which they are deficient before advancing to the next wage classification. There shall be no more than one (1) additional extended period prior to the next scheduled advancement.

Should it be found that the apprentice does not have the ability or desire to continue the training and become a competent worker, the supervisor should recommend to the employer that the agreement be terminated, and such a finding shall be deemed adequate cause for the canceling of an apprenticeship agreement. The Registration Agency shall be notified in writing of any such cancellation.

## RATIO

The ratio of journey worker/mentor to apprentice is the ideal standard for training the maximum number of apprentices while insuring proper supervision, training, safety, and continuity of employment. No more apprentices shall be employed than can be given proper supervision on the job and afforded employment opportunity upon completion of the apprenticeship.

The **minimum** ratio of journey worker/mentor to apprentice shall be one (1) journey worker/mentor to one (3) apprentices.

## PROBATIONARY PERIOD

The first year of employment for the apprentice, after signing the apprenticeship agreement, shall be a probationary period. During this probationary period, the agreement may be canceled by the Registration Agency upon request of either party thereto. After the probationary period, the agreement may be canceled for due cause. "Due Cause" shall include, but not be limited to, infraction of company rules set up in accordance with company policy, or failure to meet the required standards of proficiency. Apprentices shall be given full credit for such period toward completion of their apprenticeship. The Registration Agency shall be advised promptly of all cancellations and terminations of apprenticeship agreements, whether during or after the probationary period.

An Apprentice will serve only one (1) probationary period throughout the term of this apprenticeship program regardless of transfer(s) to another employer.

## SAFETY AND HEALTH TRAINING

The employer shall instruct the apprentice in safe and healthful work practices and shall insure that the apprentice is trained in facilities and other environments that are in compliance with either: Occupational Safety and Health standards promulgated by the Secretary of Labor or State standards that have been found to be at least as effective as the Federal standards.

## QUALIFICATIONS FOR AND SELECTION OF APPRENTICES

### Qualifications:

Applicants accepted and indentured as apprentices shall meet the following basic qualifications:

- i. Age: All applicants must be at least 18 years of age.
- ii. Education-High School Diploma or equivalent.
- iii. Physical: Applicants must be able to perform the essential functions of the job.
- iv. Score of 3 or greater on all sections of CareerReady 101 assessment

## Selection:

The recruitment, selection, employment and training of apprentices during their apprenticeship shall be without discrimination because of race, color, religion, national origin or sex. The sponsor will take affirmative action to provide equal opportunity in apprenticeship and will operate the apprenticeship program as required under the Kansas Plan of Equal Employment Opportunity in Apprenticeship and Title 29, Code of Federal Regulations, Part 30 as amended. A program sponsor who employs five (5) or more apprentices shall submit a written Affirmative Action Plan and Selection Procedure to the Registration Agency in conformity with the above regulation. Where appropriate, a sponsor may submit satisfactory evidence of compliance with an equal employment opportunity program providing for the selection of apprentices for affirmative action in apprenticeship including goals and timetables for women and minorities which has been approved as meeting the requirements of Title VII of the Civil Rights Act of 1964 as amended, or Executive Order 11246, as amended.

## APPRENTICESHIP AGREEMENT

Each apprentice shall be covered by a written apprenticeship agreement, signed by the employer and the apprentice. Such agreement shall contain a statement making the terms and conditions of these standards a part of the agreement, as if expressly written therein. For this reason, every apprentice shall read these standards before signing the agreement. A copy of each agreement shall be furnished to the apprentice, to the employer and to the Registration Agency.

The Apprenticeship Agreement does **not** constitute a certification under Title 29 CFR Part 5 for the employment of apprentices on Federally financed or assisted construction projects. Apprenticeship program sponsors are required to obtain a letter of certification from the Registration Agency for each individual project. The letter will identify the program sponsor, trade, project name and project location. It will list the registered apprentices working on the project with the last four (4) digits of their social security number, registration date and the percentage of journey worker/mentor wage rate the apprentice should be paid.

The transfer of an apprentice between apprenticeship programs and within an apprenticeship program must be based on agreement between the apprentice and the affected apprenticeship committees or program sponsors, and must comply with the following requirements:

The transferring apprentice must be provided a transcript of related technical instruction and on-the-job learning by the committee or program sponsor;

Transfer must be to the same occupation; and

A new apprenticeship agreement must be executed when the transfer occurs between program sponsors.

## CREDIT FOR PREVIOUS EXPERIENCE

All persons now employed by the company as apprentices will be placed under these apprenticeship standards and their agreements will be registered with the Registration Agency. Apprentices will be given full credit for

the time they have served as such under a verbal or written agreement, whether previously employed by the company or elsewhere, and will be paid at the rate for the period to which such credit advances them.

#### Grandfathering of Apprentices:

The grandfather privilege pertains to those employees already working in the trade classification wherein apprentice registration is being requested. Apprentices being grandfathered must have been working for the employer for 30 days prior to initial request for registration of program standards.

### SUPERVISION OF APPRENTICES

Apprentices shall be under the general supervision of the management and under the direct supervision of a qualified journey worker/mentor in this occupation, appointed by the management, to serve as supervisor of apprentices. Such supervisor of apprentices is authorized to move apprentices from one operation to another in accordance with the predetermined schedule of work training, or as the need arises due to operating conditions.

### CERTIFICATE OF COMPLETION

Upon satisfactory completion of the requirements of the apprenticeship as established herein, the employer shall certify the name of the completing apprentice to the Registration Agency and recommend that a "Completion of Apprenticeship" certificate be issued in the name of the apprentice.

### REGISTRATION OF APPRENTICESHIP STANDARDS

These standards of apprenticeship will, upon adoption by the employer, be promptly registered and copies filed with the Registration Agency. The employer reserves the right to discontinue the apprenticeship program at any time as set forth herein, including any modifications or amendments thereto. The Registration Agency shall be notified promptly of any decision to cancel the program.

These standards of apprenticeship may be amended at any time provided that no amendment or modification adopted shall alter any apprenticeship agreement in force at the time of such change without the consent of the apprentice involved. Such amendment shall be submitted to the Registration Agency before being placed in effect. A copy of each amendment adopted will also be furnished to each apprentice employed by the company.

### NOTICE TO REGISTRATION AGENCY

The Registration Agency shall be notified promptly of all new indentures, suspensions for any reason, reinstatements, cancellations, and completions.

Cancellation of apprenticeship agreements during the probationary period will not have an adverse impact on a sponsor's completion rate unless there is a consistent pattern of cancellations during the probationary period.

### ADJUSTING DIFFERENCES/COMPLAINT PROCEDURES

**Title 29 CFR 29.5 (b)(21)** For issues regarding wages, hours, working conditions, and other issues that may be covered by a Collective Bargaining Agreement, if any, apprentices may seek resolution through any applicable grievance and arbitration procedures contained in the articles of a CBA.

The Sponsor will hear and resolve all complaints of violations concerning the Apprenticeship Agreement and the Registered Apprenticeship Standards, for which written notification is received within fifteen (15) days of violations. The Sponsor will make such rulings as it deems necessary in each individual case and within thirty (30) days of receiving the written notification. Either party to the Apprenticeship Agreement



may consult with the Registration Agency for an interpretation of any provision of these Standards over which differences occur. The name and address of the appropriate authority to receive, process and make disposition of complaints is: Peaslee Tech, 2920 Haskell Ave, Lawrence, KS 66046.

**Title 29 CFR 30.11** Any apprentice or applicant for apprenticeship who believes that he/she has been discriminated against on the basis of race, color, religion, national origin, or sex, with regard to apprenticeship or that the equal opportunity standards with respect to his/her selection have not been followed in the operation of a Registered Apprenticeship program, may personally or through an authorized representative, file a complaint with the Registration Agency or, at the apprentice or applicant's election, with the private review body established by the program sponsor (if applicable).

The complaint will be in writing and will be signed by the complainant. It must include the name, address, and telephone number of the person allegedly discriminated against, the program sponsor involved, and a brief description of the circumstances of the failure to apply equal opportunity standards.

The complaint must be filed not later than one hundred eighty (180) days from the date of the alleged discrimination or specified failure to follow the equal opportunity standards, and in the case of complaints filed directly with the review body designated by the program sponsor to review such complaints, any referral of such complaint by the complainant to the Registration Agency must occur within the time limitation stated above or thirty (30) days from the final decision of such review body, whichever is later. The time may be extended by the Registration Agency for good cause shown.

Complaints of harassment in the Registered Apprenticeship program may be filed and processed under Title 29, CFR, Part 30, and the procedures as set forth above.

The Sponsor will provide written notice of their complaint procedure to all applicants for apprenticeship and all apprentices.

## CONFORMANCE WITH STATE AND FEDERAL LAWS

No section of these standards of apprenticeship shall be construed as permitting violation of any law of the State of Kansas or of the United States.

## MAINTENANCE OF RECORDS

The employer shall maintain complete records on each apprentice, covering all details of their selection and apprenticeship, including work progress, attendance and progress in related training.

The employer will also maintain complete records of the selection process applied to each applicant for apprenticeship for at least five (5) years from the date of application.

## CONSULTANT

Advice and assistance in the successful operation of this apprenticeship program will be available at any time, upon request by the employer, from representatives of the Kansas Department of Commerce - State Apprenticeship Office.

Contact information:

Chastity Troxel  
State Manager: Registered Apprenticeship Programs  
6 W Peoria  
Paola, Ks 66071  
316.218.7142  
[Chastity.Troxel@ks.gov](mailto:Chastity.Troxel@ks.gov)

## WORK EXPERIENCE

The apprentice is responsible for the documentation of all work experience and will provide this documentation to the sponsor to verify satisfactory progress through the apprenticeship program. The apprentice shall be taught the use, care and effective handling of all tools and equipment commonly used in the occupation. The apprentices shall be given work experience and training in the occupation to assure them the skill and proficiency that characterizes a qualified journey worker/mentor as herein defined. Such on-the-job learning (OJL) shall be carried on under the direction and guidance of a qualified journey worker/mentor in the occupation. No apprentice will be allowed to work overtime if it interferes with attendance with apprentice's RTI.

The workday and workweek for apprentices, and the conditions associated therewith, shall be the same as those of other classifications of employees within the company doing comparable work.

A schedule of work processes to be included in this training is attached hereto.

## ON-THE-JOB LEARNING

### **Structured On-the Job Learning (6,000 hours)**

#### **PRELIMINARY WORK (240 hours):**

- o Learning the names and uses of the equipment used in the trade: Kind, size and use of cable, wire, boxes, conduits, and fittings, switches, receptacles, service switches, cutouts, etc.
- o Learning the names and uses of the various tools used in assembling this material, care of these tools, and other instructions necessary to familiarize the apprentice with the material and tools of the trade.

#### **GENERAL INDUSTRIAL MAINTENANCE (2,800):**

- o Repair and installation of:
  - o Pneumatic and hydraulic systems
  - o Material handling equipment
  - o Equipment alignment
  - o Equipment controls
  - o Machine safety devices
  - o Layout and Fabrication
  - o Basic design of repair and installation fabrication
  - o Layout of repair and installation fabrication
  - o Cutting and welding of repair and installation fabrication
  - o Turning and milling of repair and installation fabrication
  - o General electrical installations
  - o Laying out various outlets, switches, receptacles, and other details of the job, from blueprints or by direction of foreman. Cutting wire, cable, conduit, and raceway, threading and reaming conduit.
  - o Installing various kinds of wires, cables, and conduits.
  - o Assisting in preparing lists of materials used, including names, number of pieces, or number of feet, etc., for office records.
  - o Installing proper size and types of fuses for each circuit
  - o Installing and connecting various kinds of electrical utilization equipment
  - o Troubleshooting and equipment maintenance
  - o Analysis and diagnosis of manufacturing equipment malfunctions
  - o Tracing the polarity of conductors and devices
  - o Testing the circuit for grounds and shorts and locating and correcting job defects.
  - o Use proper testing equipment and meters
  - o Proper lubrication and adjustment of manufacturing equipment

- o Use of diagnostic equipment

### **MOTORS & CONTROLLERS (460 hours)**

- o Installing over-load devices
- o Install proper disconnecting means
- o Installing over-current devices
- o Checking for proper installation and rotation
- o Installation of circuits, terminations to motor leads and disconnects
- o Analyzing motor circuits and troubleshooting
- o Installing pushbuttons, pilot lights, relays, timing devices, and interlocking controls
- o Installing and operating of Programmable Logic Controls

### **LOW PRESSURE CHILLER SYSTEMS (500 HOURS)**

- o Routine maintenance
- o Troubleshooting
- o Installation and removal

### **AUTOMATED SYSTEMS MAINTENANCE & REPAIR (1,200 HOURS)**

- o Maintain automated systems controls
- o Troubleshoot automated systems controls
- o Repair automated systems controls

### **INTEGRATION PLANNING (300 HOURS)**

### **INTEGRATION (500 HOURS)**

- o Prepare environment
- o Installation of automation components (HDMI, PLC, Robots)
- o Develop work aids
- o Assist in the preparation of operators

## **RELATED TECHNICAL INSTRUCTION**

All apprentices shall be required to attend classes in subjects related to the occupation. One hundred forty-four (144) hours per year is normally considered necessary. These classes may be given during or outside the regular working hours, depending upon available facilities. All time spent in such classes after regular working hours shall not be considered as hours of work. If required to attend classes during the regular working hours, the apprentices shall be compensated at their regular hourly rate. If, for any reason, classroom instruction is not practicable, the related technical instruction may be conducted by means of distance learning, correspondence, electronic, or company-sponsored courses approved by the Registration Agency.

The amount of time to be devoted to each subject and the sequence they are to follow will depend upon the type of work being performed by the apprentice. It is intended that this classroom instruction shall be so integrated with the work that the apprentice and the company will receive the maximum benefits from such instruction.

The apprentice is responsible for the documentation of all related technical instruction obtained on behalf of the program and will provide this documentation to the sponsor to verify satisfactory progress through the apprenticeship program.

Failure on the part of the apprentice to fulfill their obligation as to the related training studies and/or attendance, or their failure to maintain passing grades therein, shall constitute adequate cause for cancellation of their apprenticeship agreement.

An outline of the related technical instruction to be included in this training is attached hereto.

All related technical instruction Instructors must meet the State education requirements for a vocational-technical instructor in Kansas, or be a subject matter expert, which is an individual, such as a journey

worker/mentor, who is recognized within an industry and by the sponsor as having expertise in this occupation.

Related Technical Instruction will be administered by Dwayne Peaslee Technical Training Center.

<b><u>Course</u></b>	<b><u>Hours</u></b>
OSHA 10-hour General Industry	10
Technical Math	40
Arc Flash Electrical Safety NFPA 70E®	16
Basic Industrial Electrical	40
Electrical Wiring and Motors	40
Drives and Motor Controls	40
Low Pressure Chiller Systems	40
Introduction to Welding	40
Introduction to Machining	40
Hydraulics and Pneumatics	40
PLC Level 1	40
PLC Level 2	28
Automation in Material Handling Systems	12
HMI Technologies & PLC Applications	24
Mechatronics	24
Mechatronics Introduction to Robotic Systems	24
Introduction to Robotic Integration	24
<u>Servos and Drives for Mechatronics</u>	<u>24</u>
<b>Total</b>	<b>546 hours</b>