

STANDARDS OF APPRENTICESHIP
Adopted by

SOUTHERN OREGON AVIATION JATC

<u>Occupational Title:</u>	<u>SIC #</u>	<u>SOC #</u>	<u>SYMBOL</u>	<u>SUFFIX</u>	<u>Term</u>
Air Frame & Power Plant Mechanic	4581	49-3012	0005	000	4,812 OJT hours

MA#: **5035** SOC Title: **Aircraft Mechanics and Service Technicians** License: **FAA Certification (Not provided during apprenticeship)**



APPROVED BY THE
Oregon State Apprenticeship and Training Council (OSATC)

Registered with the

Apprenticeship and Training Division
Oregon Bureau of Labor and Industries
1800 SW 1st Ave, Suite 500
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Appendices A – H contain information specific to this program.

Introduction – Apprenticeship Standards

The Oregon State Apprenticeship and Training Council (OSATC) has the authority, under the direction of the Apprenticeship and Training Division, to develop, administer, and enforce apprenticeship program standards (Standards) for the operation and success of an apprenticeship or on-the-job training program in the State of Oregon. Apprenticeship programs and committees function to administer, exercise or relinquish authority only with the consent of the OSATC. Only apprentices registered with or recognized by the Oregon Bureau of Labor and Industries (BOLI), Apprenticeship and Training Division (ATD) will be recognized by the OSATC. Parties' signatory to these apprenticeship standards declare that their purpose and policy is to establish and sponsor an organized system of registered apprenticeship and training education.

These Standards are in conformity with and are to be used in conjunction with the Apprenticeship Rules, Chapter 839-011 OAR (Oregon Administrative Rules); Apprenticeship and Training Statutes, Chapter 660 ORS (Oregon Revised Statute); The National Apprenticeship Act, 29 U.S.C. (United States Code) 50; Apprenticeship Programs, Title 29 Part 29 CFR (Code of Federal Regulations); and Equal Employment Opportunity in Apprenticeship and Training, Title 29 Part 30 CFR which collectively govern the employment and training in apprenticeable occupations. They are part of the apprenticeship agreement and bind all signers to compliance with all provisions of registered apprenticeship.

If approved by the OSATC, such amendment(s) and such changes as adopted by the OSATC shall be binding to all parties on the first day of the month following such approval. Sponsors shall notify apprentices and training agents of changes as they are adopted by the OSATC. If and when any part of these Standards becomes illegal, as it pertains to federal and/or state law, that part and that part alone will become inoperative and null and void, and the Oregon Bureau of Labor and Industries (BOLI) may recommend language that will conform to applicable law for adoption by the OSATC. The remainder of the Standards will remain in full force and effect.

See ORS Chapter 660.010 & OAR 839-011-0070 for the definitions of terms used within these Standards.

Notes: The body of this document contains boilerplate language that applies to all registered apprenticeship programs in the State of Oregon. Boilerplate language may only be modified by the Oregon State Apprenticeship and Training Council.

Appendices A-H are specific to the individual standard and may be modified by the sponsor by submitting a revised standard for approval by the Oregon State Apprenticeship and Training Council or by the Apprenticeship and Training Division (ATD) with concurrence from OSATC where permitted by ORS 660 and OAR 839-011.

1. **GEOGRAPHIC AREA COVERED:**

These standards establish the apprenticeable occupation to be taught and designate the geographical area or areas in which the standards will apply. (ORS 660.126) The Sponsor shall have a plan to ensure that participating employers will provide work in all areas covered by the program standards (OAR 839-011-0084). The Sponsor shall ensure compliance with the provisions for and of any Reciprocity Agreement recognized by the OSATC. (ORS 660.120 / OAR 839-011-0260)

The geographic area covered by these standards are located in Appendix A: Geographical Area. [\(Ctrl + Click to follow link\)](#)

2. **MINIMUM QUALIFICATIONS:**

Minimum qualifications, including a minimum age of at least 16, must be clearly stated, comply with federal and state regulations, and be applied in a nondiscriminatory manner (ORS 660.126 (1b)). The Sponsor shall maintain documentation for all minimum qualifications for any apprentice who is registered.

Minimum Qualifications for this standard are located in Appendix B: Minimum Qualifications. [\(Ctrl + Click to follow link\)](#)

3. **OREGON PLAN for EQUAL EMPLOYMENT OPPORTUNITY IN APPRENTICESHIP (OAR 839-011-0200) – PROGRAM OBLIGATIONS:**

Standards must include the Oregon Equal Employment Opportunity in Apprenticeship and Training Pledge as specified in the Oregon Plan for Equal Employment Opportunity in Registered Apprenticeship Programs (OPEEO) Section 3(h)(i).

EEO PLEDGE

SOUTHERN OREGON AVIATION JATC shall not discriminate against apprenticeship applicants or apprentices based on race, color, religion, national origin, sex (including pregnancy and gender identity), sexual orientation, genetic information, or because they are an individual with a disability or a person 18 years old or older. **SOUTHERN OREGON AVIATION JATC** shall take affirmative action to provide equal opportunity in apprenticeship and shall operate the apprenticeship program as required under these rules and Title 29 CFR, part 30.

Sponsors with five (5) or more apprentices must adopt an Equal Employment Opportunity Plan and Selection Procedures and submit the plan for OSATC approval. (OAR 839-011-0200 / OPEEO Sections 4 & 10).

A. **EQUAL EMPLOYMENT OPPORTUNITY PLAN:**

- i. A Sponsor's commitment to equal opportunity in recruitment, selection, employment and training of apprentices shall include the adoption of a written affirmative action plan. (OAR 839-011-0200 / OPEEO section 8). Each Sponsor required under OPEEO section 4 to develop and maintain an EEO program must retain both the written EEO plan and documentation of its component elements set forth in OPEEO sections 5, 6, 7, 8, 9, and 11.

- ii. In addition, the sponsor will set forth the specific steps that it will take under this plan, review and update the specific steps that it will take to implement the plan at least yearly and submit the updated steps to the Apprenticeship and Training Division (ATD) for review and approval. (OPEEO section 8)
- iii. Numerical utilization goals for the selection of minorities, females, and individuals with disabilities for apprenticeship shall be submitted to ATD at least every three (3) years and prior to the date that any previous goals expire. (OPEEO sections 6 & 7).
- iv. The sponsor hereby adopts the following activities, at a minimum, in order to generate an increase in applications for apprenticeship and improve retention of apprentices from the targeted groups and/or individuals with disabilities:

- a. RECRUITMENT

Advertising openings for apprenticeship opportunities using methods and in locations that result in applications from candidates from the underutilized groups.

- b. OUTREACH

Dissemination of information to organizations serving underutilized groups regarding the nature of apprenticeship.

Cooperation with local school boards and career technical education systems to develop and/or establish relationships with pre-apprenticeship programs targeting students from the underutilized groups to prepare them to meet the standards and criteria required to qualify for entry into apprenticeship programs.

Establishment of formal agreements or partnerships enlisting the assistance and support of pre-apprenticeship programs, community-based organizations, advocacy organizations, or other appropriate organizations, in recruiting qualified individuals for apprenticeship.

- c. RETENTION:

Practices to retain targeted populations and maintain working and learning environments which supports current apprentices to remain with the program.

B. SELECTION PROCEDURES:

Sponsors with five (5) or more apprentices must adopt a selection procedure and apply it uniformly to all applicants regardless of race, color, religion, national origin, sex, sexual orientation, age (18 or older), genetic information, and disability. (ORS 660.137 (3) / OPEEO section 10).

Selection Procedures for this program are located in Appendix C: Selection Procedures. ([Ctrl + Click to follow link](#))

C. DISCRIMINATION COMPLAINTS:

- i. Any apprentice or applicant for apprenticeship who believes they have been discriminated against with regards to apprenticeship by the committee may file a complaint. (OAR 839-011-0200 / OPEEO Section 14)
- ii. The basis of the complaint may be:
 - a. Discrimination on the basis of race, sex, color, religion, national origin, age, disability or as otherwise specified by law by a sponsor or a sponsor's program
 - b. The equal employment opportunity plan has not been followed; or
 - c. The Sponsor's equal employment opportunity plan does not comply with the requirements of the Oregon Equal Employment Opportunity in Apprenticeship Plan.
- iii. Generally, a complaint must be filed within three hundred (300) days of the alleged discrimination or specified failure to follow the equal opportunity standards. However, for good cause shown, the Registration Agency may extend the filing time.
- iv. The written complaint must include the name, address and telephone number of the person allegedly discriminated against, the sponsor involved and a description of the circumstances of the complaint, a short description of the events that took place, and the complainant's signature.
- v. For complaints dealing with program operations see section 10 (Administrative Disciplinary Procedures) of this standard.

4. **TERM of APPRENTICESHIP:**

- A. 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 in the time-based approach), the attainment of competency (competency-based approach), or a blend of the time-based and competency-based approaches (hybrid approach).
- B. 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.
 - i. The term of apprenticeship for a time-based approach must be stated in hours unless otherwise required by a collective bargaining agreement, civil service or other governing regulation. (ORS 660.126)
- C. 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 an on-the-job learning component of Registered Apprenticeship. 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.
- D. 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. (Title 29 Part 29(5)(b)(2) CFR) OAR 839-011-0084(A)(B)(C))

- E. When the apprentice is granted advanced standing, the employer must pay the apprentice at the appropriate wage per the wage progression schedule specified in these standards or higher. (ORS 660.142)

NOTE: In licensed occupations the apprentice must complete the minimum hours of documented legal experience.

The term of apprenticeship for this program is located in Appendix D: Term, Probationary Period, Ratio. ([Ctrl + Click to follow link](#))

5. INITIAL PROBATIONARY PERIOD:

- A. All apprentices are subject to an initial probationary period, stated in hours of employment, beginning on the effective date of the apprentice's current registration into the program. During this time, the apprentice's appeal rights are restricted, and the Sponsor may terminate an apprenticeship agreement without cause. (ORS 660.126 (1g))
- B. The initial probationary period must be reasonable in relationship to the full term of the apprenticeship unless otherwise required by Civil Service, Collective Bargaining Agreement (CBA) or law. It cannot exceed one year (12 months) or 25 percent of the length of the program, whichever is shorter. (ORS 660.126 (1g))
- C. During the initial probationary period either party to the agreement may terminate the apprenticeship agreement upon written notice to the Apprenticeship and Training Division of the Oregon Bureau of Labor and Industries. (ORS 660.126 (1g) & ORS 660.060 (6))
- D. Full appeal rights are available to apprentices who have completed the initial probationary period. After the probationary period the Sponsor may only suspend, cancel or terminate the apprenticeship agreement for good cause, with prior written notice to the apprentice, and with written notice to the apprentice and to the Apprenticeship and Training Division of the Bureau of Labor and Industries of the final action taken by the committee. (ORS 660.060 (6) & (7) and section 10 of this standard)

The probationary period for this program is located in Appendix D: Term, Probationary Period, Ratio. ([Ctrl + Click to follow link](#))

6. RATIO OF APPRENTICES TO JOURNEY LEVEL WORKERS

- A. There shall be a maximum numeric ratio of apprentices to journey-level workers consistent with proper supervision, training, safety and continuity of employment. (ORS 660.126 (1f))
- B. The ratio shall be specifically and clearly stated as to its application to the job site, workforce, department, shift, plant or combination therein. (ORS 660.126 (1f))
- C. To ensure safety and training in all phases of the work, the Sponsor and its Training Agents shall ensure that apprentices are under the supervision of competent and qualified journey-level workers on the job who are responsible for the work being performed. (ORS 660.126 (1f), ORS 660.137 (5), OAR 839-011-0143)

The ratio of apprentices to journey level workers for this program is located in Appendix D: Term, Probationary Period, Ratio. ([Ctrl + Click to follow link](#))

7. APPRENTICE WAGES and WAGE PROGRESSION:

- A. The apprentice shall be paid according to a progressively increasing schedule of wage based on specified percentages of the average journey-level wage consistent with skills acquired. (ORS 660.126 (1h), OAR 839-011-0082(6a), OAR 839-011-0093, & OAR 839-011-0310)
- B. Wage progressions shall be indicated in hourly or monthly periods (the registration agency recommends the use of hour periods) set by the Sponsor. (ORS 660.126 (1h))
- C. The entry wage listed in this standard shall not be less than the federal or state minimum wage rate for the region covered by the geographical jurisdiction by that standard, whichever is higher. (ORS 660.142 (4))
- D. The wage listed in this standard at all periods establishes a minimum, but a higher wage shall be paid if it is required by other applicable federal law, state law, respective regulations, or by a collective bargaining agreement. (ORS 660.126 (1h), ORS 660.137 (6), ORS 660.142 & OAR 839-011-310 (3))
- E. The sponsor must re-determine the average journey-level wage at least annually and submit the new average journey wage to the Director of the Apprenticeship and Training Division with a statement explaining how such determination was made and the effective date of the new average journey wage. (ORS 660.137 (6))
- F. Upon receipt of a committee's determination of its current journey worker hourly wage rate, the Director, the Division shall notify all training agents and apprentices of the new wage. (ORS 660.142 (2))

The average wage and wage progression for this apprenticeship standard are located in Appendix E: Wage and Wage Progression. ([Ctrl + Click to follow link](#))

8. WORK PROCESSES:

- A. The Sponsor shall provide the necessary instruction and experience for apprentices to become journey-level workers versed in the theory and practice of the occupation. (ORS 660.137 / OAR 839-011-0270(1b))
- B. The Sponsor shall require the approximate hours listed in the standard's Work Processes as closely as conditions will permit for every apprentice. A Sponsor unable to provide an apprentice with work experience equaling at least 50% of the hours listed in any of the work processes must provide and document additional related training to compensate for the lack of on-the-job training. (ORS 660.126 (1e), OAR 839-011-0084(3b), and OAR 839-011-0265(1))

NOTE: In licensed occupations apprentices must complete the minimum required total hours prior to being referred to the license examination. (OAR 839-011-0265(2))

Work processes for this program are located in Appendix F: Work Processes. ([Ctrl + Click to follow link](#))

9. **RELATED TRAINING:**

- A. The apprentice must attend related/supplemental instruction for at least 144 hours per year unless otherwise stated in this standard. Time spent in related/supplemental instruction will not be considered as hours of work, and the apprentice is not required to be paid for time so spent except where the training agent states by policy or CBA whether and under what circumstances an apprentice is entitled to be financially compensated for attending related instruction. (ORS 660.126 (1e), ORS 660.157, OAR 839-011-0084, and OAR 839-011-0088(1b))
- B. The Committee must provide for instruction of the apprentice during the related/supplemental instruction in safe and healthful work practices in compliance with the Oregon OSHA regulations and applicable federal and/or state regulations. (ORS 660.137 / OAR 839-011-0082 (6a), OAR 839-011-0084, & OAR 839-011-0310)
- C. In case of failure on the part of any apprentice to fulfill the related instruction obligation, the sponsor has the authority to withhold the apprentice's periodic wage advancement; or with a reasonable opportunity to remedy deficiencies, suspend, or cancel the Apprenticeship Agreement. (ORS 660.137 (4))
- D. Clock hours of actual attendance by the apprentice in related/supplemental instruction classes at the community college, training trust or other approved training provider shall be documented and tracked by the Committee. (ORS 660.137 (2a))
- E. Related instruction activities must be at the direction of a qualified instructor. (ORS 660.120 (3), ORS 660.157 (5), ORS 660.160, OAR 839-011-0084 (3f))

The Sponsor must identify the methods of related/supplemental training must consist of one or more of the following: (ORS 660.120 (3), ORS 660.157, OAR 839-011-0084 (3f)).

A minimum number of 144 hours per year are required unless the program has received a waiver from the Oregon State Apprenticeship and Training Council. (ORS 660.157(2))

A summary of related training topics, hours, and methods are located in Appendix G: Related Training. ([Ctrl + Click to follow link](#))

10. **ADMINISTRATIVE/DISCIPLINARY PROCEDURES:**

- A. The Sponsor shall administer its program in conformity with its approved standards, with the provisions of ORS 660.002 to 660.210, and with the rules and policies of the council and the division. The Sponsor shall establish policies to meet these requirements and list them in this section. The Sponsor shall maintain a separate document for the procedures it will utilize to implement its policies. (ORS 660.137 (2) and OAR 839-011-0073)
- B. The committee may include provisions for committee-imposed "disciplinary probation," which is a time assessed when the apprentice's progress is not satisfactory; a "disciplinary probation" may only be used to provide an opportunity for the apprentice to correct deficiencies and cannot affect the apprentice's appeal rights after the initial probation is completed. (ORS 660.137 (4))
- C. During disciplinary probation the committee may withhold periodic wage advancements, suspend or cancel the apprenticeship agreement, or take other disciplinary action. (ORS 660.137 (4))

- D. The apprentice has the right to file an appeal of the committee's disciplinary action with the Director of the Apprenticeship and Training Division. (ORS 660.120, OAR 839-011-0090 and OAR 839-011-0093)
- E. Complaint and Appeal Procedures:
- i. Each committee shall adopt and submit complaint review procedures for Division approval. (OAR 839-011-0084 (3g))
 - ii. All approved committees are expected to administer the program's approved complaint review process in a fair and consistent manner. (ORS 660.120, ORS 660.060 & OPEEO Section 14)
 - iii. Complaints that involve matters covered by a collective bargaining agreement are not subject to the complaint review procedures in this section. (ORS 660.126 (2))
 - iv. After the initial probationary period the apprenticeship agreement may be canceled by a written request from the apprentice. (ORS 660.126 (1g) ORS 660.060 (7))
 - v. After the initial probationary period the committee may only suspend, cancel or terminate the apprentice agreement for good cause, which includes but is not limited to: failure to report to work, nonattendance at related instruction, failure to submit work progress reports and lack of response to committee citations. (ORS 660.060 (7))
 - a. Due notice and a reasonable opportunity for correction must be provided to the apprentice.
 - b. Upon suspension a written notice must be provided to the apprentice and to the Apprenticeship and Training Division.
 - c. Upon cancellation a written notice must be provided to the apprentice and to the Apprenticeship and Training Division.
 - vi. Each committee shall utilize the following procedures and timelines for disciplinary action (cancellation or termination). Committees may adopt and submit alternate complaint procedures, for Division review and approval, providing the procedures are reasonably expected to offer equal protection to the apprentice. (ORS 660.137, OAR 839-011-0175)
 - a. At least 22 days prior to potential disciplinary action by a committee (OAR 839-011-0175):
 - The committee must notify the apprentice in writing of alleged reason for the proposed disciplinary action and potential action to be taken if the allegation is substantiated
 - The decisions are effective immediately upon committee action
 - The committee will send written reason(s) for such action to the apprentice by registered or certified mail and will include the appeal rights of the apprentice.
 - b. Within 30 days of receipt of committee decision the apprentice may request reconsideration of the action taken by the committee
 - The apprentice's request for the local committee to reconsider their disciplinary action must be submitted in writing and must include the reason(s) the apprentice believes the committee should reconsider the disciplinary action.
 - vii. Within 30 days of apprentice's request for reconsideration

- The local committee must provide written notification of their final decision including the appeal rights of the apprentice if the committee upholds its decision on the disciplinary action
- viii. If the apprentice chooses to pursue the complaint further
- a. Within 30 days of notification of the committee's final action
 - The apprentice must submit the complaint describing in writing the issues associated with the disciplinary action to the Director of the Apprenticeship and Training Division
 - The apprentice must describe the controversy and provide any backup information
 - The apprentice must also provide this information to the local committee/organization
 - b. Within 60 working days the Director of the Apprenticeship and Training Division will complete a review of the record
 - If no settlement is agreed upon during review, the Director must issue a non-binding written decision resolving the controversy.
- ix. If the apprentice or local committee disputes the Director's decision
- a. Within 30 days of Director's decision the dissenting party must submit a request for the OSATC to hear its case
 - Request must be in writing
 - Must specify reasons supporting the request
 - Request and supporting documents must be given to all parties
 - OSATC Rules and Policy Sub-Committee conducts hearing within 45 days and reports its findings to the next regular quarterly meeting of the OSATC
 - The OSATC renders a decision based on the sub-committee's report.
 - b. Within 30 days of the OSATC meeting
 - The Secretary of the OSATC issues the decision in writing.

11. **COMMITTEE – RESPONSIBILITIES AND COMPOSITION**

The following is an overview of the requirements associated with administering an apprenticeship committee and/or program. These provisions are to be used in conjunction with the corresponding ORS and/or OAR.

- A. The committee is the policymaking and administrative body responsible for the operation and success of this Apprenticeship program.
- B. The committee is responsible for the day-to-day operation of the apprenticeship program and must be knowledgeable in the application of Chapter 660 ORS, OAR 839 division 011 and other law and rule as appropriate to the occupation(s).
- C. Sponsors must develop policies and procedures for committee operations and provide a copy to registered apprentices (ORS 660.060 (8), ORS 660.135, ORS 660.137, OAR 839-011-0170, and OAR 839-011-0310 (1b)). The committee's specific policies pertaining to the operation of the program are included in this standard. The procedures for the implementation of the approved policies are maintained by the committee. After approval by the division the approved procedures shall be distributed to all apprentices and training agents.

- D. Committees shall meet as often as is necessary to transact business and at least semi-annually with a quorum in order to review and evaluate the progress of each apprentice. (ORS 660.137 (4) and ORS 660.145)
- i. A quorum shall consist of at least two (2) members representing the employers and two (2) members representing the employees. (ORS 660.135 (3), ORS 660.145)
 - ii. Sponsors must hold a physical meeting for all disciplinary actions. Electronic polling is prohibited for issues requiring the personal appearance of applicants, apprentices, trainees, training agents or employers. (OAR 839-011-0170)
 - iii. Minutes of all meetings must be submitted to the Apprenticeship and Training Division within 10 working days of the meeting. (OAR 839-011-0170)
- E. Program Operations (ORS 660.135, ORS 660.137, OAR 839-011-0170, OAR 839-011-0200):
- i. The Committee will record and maintain records pertaining to the local administration of its Apprenticeship Program and make them available to the OSATC or its representative on request.
 - a. These records include, but are not limited to:
 - Selection of applicants
 - Administration of the apprenticeship program
 - Affirmative action plans
 - Documentation necessary to establish a sponsor's good faith effort in implementing its affirmative action plan
 - Qualification standards
 - ii. Records required by the Oregon Equal Employment Opportunity in Apprenticeship Plan (OAR 839-011-0200) will be maintained for five (5) years; all other records will be maintained for five (5) years after the final action taken by the committee on the apprenticeship agreement.

The following must be submitted by all programs through the Oregon Apprenticeship Tracking System (OATS) apprenticeship management portal:

- a. Apprenticeship Registration Agreement – within the first 45 days of employment as an apprentice. (ORS 660.020, OAR 839-011-0088) (In licensed occupations registration must occur prior to employment in the trade)
- b. Committee Minutes – within 10 working days of the meeting. (OAR 839-011-0170)
- c. Authorized Training Agent Agreements – with the meeting minutes at which they are approved. (ORS 660.020, OAR 839-011-0162)
 - Interim recognition may be authorized by committee policy but may not exceed 45 calendar days.
 - Any recognition of a training agent prior to formal action of the committee must be in conformance with the committee's OSATC approved policy.
- d. Revision of Occupation Standards - as necessary, no later than 45 days prior to OSATC meeting. (OAR 839-011-0030) (Programs should review their Standards at least annually)
- e. Revision of Committee Member Composition as necessary (included in committee minutes). (OAR 839-011-0074)

- f. Average Journey Level Wage – at least annually or whenever changed (included in committee meeting minutes with a summary of how the average wage was determined). (ORS 660.137 (6), ORS 660.142)
- g. Adopt, as necessary or as directed, local program policies and procedures for the administration of the apprenticeship program in compliance with this Standard. (ORS 660.060 (9), ORS 660.120 (4a), OAR 839-011-0073)
 - Policies must be submitted to the OSATC for review and approval.
 - Procedures must be submitted for Division (ATD) approval and inclusion by reference in this Standard prior to implementation.
- h. Authorization for issuance of initial license may be granted after the committee is found to be in compliance for operational purposes.
- i. Forms are available from the Apprenticeship and Training Division. If approved by the OSATC, such amendment(s) and such changes as adopted by the OSATC will be binding to all parties on the first day of the month following OSATC approval.

F. Apprentice Management:

- i. Applicants accepted by the committee, who have documented legal experience creditable to the apprenticeship in the skilled occupation or in some other related capacity, may be granted advanced standing as apprentices. (OAR 839-011-0088 (3a)) Apprentices admitted to advanced standing will be paid the wage rate for the period to which such credit advances them. In licensed occupations previous credit must be documented legal experience. (OAR 839-011-0088 (3b))
- ii. Each apprentice (and, if under 18 years of age, the parent or guardian) will sign an Apprenticeship Agreement with the Sponsor, who will then register the Agreement, with the Apprenticeship and Training Division of the Bureau of Labor and Industries within the first 45 days of employment as an apprentice. (ORS 660.020 (1), ORS 660.060, OAR 839-011-0088)
- iii. The Sponsor shall provide a copy of the committee meeting minutes approving any change of disposition or modification of the Registration Agreement to the Apprenticeship and Training Division within 10 working days of the committee meeting. (OAR 839-011-0170)
 - a. Requests for disposition or modification of Agreements include: (1) Certificate of completion, (2) Additional credit, (3) Suspension, military service, or other, (4) Reinstatement, (5) Cancellation, (6) Re-rates, (7) Holds, (8) Examination Referral, (9) Corrections, (10) Limited Supervision-electrical, (11) Phased Supervision-plumbing.
- iv. Rotate apprentices in the various processes of the skilled occupation to ensure the apprentice is trained to be a competent journey-level worker. (ORS 660.137 (2c), OAR 839-011-0265.
- v. At least once every six months the sponsor must review and evaluate each apprentice's progress and take action to advance based on the apprentice's progress or hold the apprentice at the same level for a reasonable period and opportunity for corrective action or terminate for continued inadequate progress. (ORS 660.137 (4))
- vi. The evidence of such action will be the record of the apprentice's progress on the job and during related/supplemental instruction.

- a. If the apprentice's progress is not satisfactory, the committee has the obligation to withhold the apprentice's periodic wage advancements, suspend or cancel the Apprenticeship Agreement, or take other disciplinary action as established under the "Administrative/Disciplinary Procedures."
- vii. The Sponsor has the obligation and responsibility to provide, within the constraints of industry and market conditions, reasonably continuous employment for all apprentices in the program. (ORS 660.126, ORS 660.020, and OAR 839-011-0310 (2))
 - a. The committee may arrange to transfer an apprentice from one training agent to another or to another committee when the committee is unable to provide reasonably continuous employment, or they are unable to provide apprentices the diversity of experience necessary for training and experience in the various work processes as stated in this Standard.
 - b. If, for any reason, a layoff of an apprentice occurs, the Apprenticeship Agreement will remain in effect unless canceled by the committee.
- viii. An apprentice who is unable to perform the on-the-job portion of apprenticeship training may, if the apprentice so requests and the committee approves, participate in related/supplemental instruction classes, subject to the apprentice obtaining and providing written medical approval for such participation. However, time spent will not be applied toward the on-the-job portion of apprenticeship training. (ORS 660.126 (i))
- ix. The Sponsor shall hear and address all complaints of violations of apprenticeship agreements. (ORS 660.137)
- x. Upon successful completion of apprenticeship, as provided in these Standards, and passing any examination that the committee may require, the committee will recommend that the Oregon Commissioner of Labor award a Certificate of Completion of Apprenticeship. (ORS 660.137, ORS 660.205)

G. Training Agent Management:

- i. The Sponsor shall afford all employers and their qualified employees the opportunity to participate, on a non-discriminatory basis, in existing programs. (OAR 839-011-0084 (2))
- ii. The Sponsor shall provide equal treatment and opportunity for all apprentices through reasonable working and training conditions and apply those conditions to all apprentices uniformly. (OAR 839-011-0200)
- iii. The Sponsor shall provide training agents and prospective training agents with a written statement of costs for program participation. (OAR 839-011-0084(3c))
- iv. The Sponsor shall not require an employer to sign a collective bargaining agreement or join an association as a condition of participation. (OAR 839-011-0162 (3))
- v. The Sponsor shall determine the adequacy of an employer to furnish proper on-the-job training in accordance with the provisions of these Standards. (ORS 660.137(5))
- vi. The Sponsor shall require all employers requesting approved training agent status to complete a training agent application and comply with all Oregon State apprenticeship laws and the appropriate apprenticeship Standards. (ORS 660.137(5))

- vii. The Sponsor shall submit approved training agent agreements to the Apprenticeship and Training Division within ten (10) working days of committee approval with a copy of the agreement and/or the list of approved training agents and committee minutes where approval was granted. (OAR 839-011-0170)
- viii. The Sponsor shall make periodic checks of approved training agents and withdraw approval when approval qualifications are no longer met or when it appears to the committee that the employer is in violation of the terms of the apprenticeship agreement, standards, rules, regulations and policies of the committee or OSATC. (ORS 660.137(5))
- ix. If a committee acts to withdraw training agent status from an employer, the action must be recorded in the committee minutes and submitted to the Apprenticeship and Training Division within 10 working days of the committee action. (OAR 839-011-0170)

H. OSATC Required Policies: (ORS 660.120 - ORS 660.137/OAR 839-011-0073)

- i. All local committees shall develop and administer operating policies and procedures to govern program operations as directed by the OSATC and administer such policies and procedures in a consistent manner. Policies and procedures will be approved by the committee and recorded in the meeting minutes.
- ii. When adopted or revised, the Sponsor shall submit these policies and procedures to ATD staff who will advise the Sponsor regarding their conformity with apprenticeship laws, rules and OSATC guidelines.
- iii. Committee policies and procedures must include the following written policies:
 - a. Credit for prior experience
 - b. OJT requirements (hours, work processes, rotation/partial rotation, monthly progress reports, timelines, applicable penalties)
 - c. Related training requirements (attendance, grades):
 - d. Complaint procedures:
 - e. Process for the review and evaluation of apprentice progress:
 - f. Advancement requirements (re-rates, completions):
 - g. Disciplinary process (appearances, holds, cancellations):
 - h. Training agent requirements (approval, discipline, removal):
 - i. Traveling training agent policy:
 - j. Initial employment policy:
 - k. Placement procedures for out-of-work apprentices:
 - l. License requirements, including exam referral and completion requirements (for licensed trades only).

I. Composition of Committee:

- i. Joint apprenticeship and training committees must be composed of an equal number of employee and employer representatives composed of at least four principal members but no more than eight principal members. An alternate member may be appointed for each principal member. A quorum shall consist of at least two employer members and two employee members. (ORS 660.135; OAR 839-011-0074)

- ii. Trades apprenticeship and training committees must be composed of an equal number of employee and employer representatives composed of one principal employee and one principal employer member for each occupation covered by the trades committee. An alternate member may be appointed for each principal member. A quorum shall consist of at least two employer members and two employee members. (ORS 660.145; OAR 839-011-0074)
- iii. Employee representatives shall
 - a. be skilled practitioners of the trade or occupation and be a member of the collective bargaining unit if a collective bargaining agreement exists for the trade or occupation that is the subject of the apprenticeship or training program administered by the committee (OAR 660.135); or
 - b. be a bargaining unit representative for the employees of a participating training agent (OAR 839-011-0074(1b)); and
 - c. not serve in a supervisory capacity as defined in the National Labor Relations Act, as amended. (OAR 839-011-0074(1b))
- iv. The committee shall elect a chairperson and a secretary from the committee members. One of the offices must be held by an employer member and one office must be held by an employee member. (OAR 839-011-0074(8))
- v. The Council or the Sponsor may remove committee members or officers for failure to abide by ORS 660 or the rules and policies of the OSATC or committee. (OAR 839-011-0078)

The program administered by this committee is a:

JATC

(ORS 660.135) or (ORS660.145)

The employer representatives shall be: (See attached committee list)

The employee representatives shall be: (See attached committee list)

12. **SUBCOMMITTEE**

Subcommittee(s) may be approved by the sponsor but may only recommend actions to the parent Committee.

13. **PROGRAM CONTACT INFORMATION**

The Sponsor may employ a person(s) as a full or part-time Training Coordinator(s)/Training Director(s)/Administrator(s). This person(s) will assume responsibilities and authority for the operation of the program as are specifically delegated by the Sponsor. (ORS 660.135(5)) See Appendix H for this program's contact information.

Program contact information is located in Appendix H: Program Contact. ([Ctrl + Click to follow link](#))

APPENDIX A: GEOGRAPHICAL AREA

The geographic area covered by these standards are

**CURRY COUNTY
DOUGLAS COUNTY
JACKSON COUNTY
JOSEPHINE COUNTY
KLAMATH COUNTY**

in the State of Oregon.

APPENDIX B: MINIMUM QUALIFICATIONS

Minimum Qualifications for this standard are:

Age:	16 years of age with high school diploma or 18 years old.
Education:	High School Diploma or GED equivalency
Physical:	N/A
Testing:	None
Other:	Applicants must be able to read and understand English.

APPENDIX C: SELECTION PROCEDURES

Selection Procedure:

All out of work apprentices in good standing will be offered the opportunity for re-employment prior to new applicants being registered in conformance with the committee's approved initial employment policy.

The committee shall select apprentices from a pool of eligible applicants according to the following procedure:

N/A less than 5 apprentices.

APPENDIX D: TERM, PROBATIONARY PERIOD, RATIO

Term of Apprenticeship:

This is a time-based apprenticeship standard. The term of this standard of apprenticeship shall be **4,812** hours of employment.

Probationary Period:

The probationary period shall be the first **500** OJT hours of employment, or one year after the current registration to this standard, whichever is shorter.
(ORS 660.126 (g))

Ratio:

The ratio of apprentices to journey-level worker shall not be more than:

One (1) apprentice to the first **one (1)** journey-level worker on

The same shift, in the same department in the plant.

Additional apprentices are authorized at a ratio of **one (1)** apprentice for each additional **one (1)** journey-level worker(s). (ORS 660.126 (f))

APPENDIX E: WAGE AND WAGE PROGRESSION

The average wage for those journey-level workers employed by the participating employers in this occupation on **JULY 1, 2023** is **\$25.20** per hour.

Period	Number of required hours	% of the journey level rate
1st	0 – 1203	65
2nd	1204 – 2406	75
3rd	2407 – 3609	85
4th	3610 – 4812	95

APPENDIX F: WORK PROCESSES

The work processes and approximate training hours in each area are:

Work processes	Approximate hours
A. GENERAL TASKS	
1. BASIC ELECTRICITY Calculate and measure capacitance and inductance; calculate and measure electrical power; measure voltage, current, resistance, and continuity; determine the relationship of voltage, current, and resistance in electrical circuits; read and interpret aircraft electrical circuit diagrams, including solid state devices and logic functions; inspect and service batteries.	125
2. AIRCRAFT DRAWINGS Use aircraft drawings, symbols, and system schematics; draw sketches of repairs and alterations; use blueprint information; use graphs and charts.	100
3. WEIGHT AND BALANCE Weigh aircraft; perform complete weight-and-balance check and record data.	40
4. FLUID LINES AND FITTINGS Fabricate and install rigid and flexible fluid lines and fittings.	25
5. MATERIALS AND PROCESSES Identify and select appropriate non-destructive testing methods; perform dye penetrant, eddy current, ultrasonic, and magnetic particle inspections; perform basic heat-treating processes; identify and select aircraft hardware and materials; inspect and check welds; perform precision measurements.	50
6. GROUND OPERATION AND SERVICING Start, ground operate, move, service, and secure aircraft and identify typical ground operation hazards; identify and select fuels.	50
7. CLEANING AND CORROSION CONTROL Identify and select cleaning materials, inspect, identify, remove, and treat aircraft corrosion and perform aircraft cleaning.	80
8. MATHEMATICS Extract roots and raise numbers to a given power; determine areas and volumes of various geometrical shapes; solve ratio, proportion, and percentage problems; perform algebraic operations involving addition, subtraction, multiplication, and division of positive and negative numbers.	100
9. MAINTENANCE FORMS AND RECORDS Write descriptions of work performed including aircraft discrepancies and corrective actions using typical aircraft maintenance records; complete required maintenance forms, records, and inspection reports.	125
10. BASIC PHYSICS Use and understand the principles of simple machines; sound, fluid, and heat dynamics; basic aerodynamics; aircraft structures; and theory of flight.	50

11. MAINTENANCE PUBLICATIONS Demonstrate ability to read, comprehend, and apply information contained in FAA and manufacturer'' aircraft maintenance specifications, data sheets, manuals, publications, and related Federal Aviation Regulations, Airworthiness Directives, and Advisory materials, read technical data.	50
12. MECHANIC PRIVILEGES AND LIMITATIONS Exercise mechanic privileges within the limitations prescribed by FAR 65.	25
13. AVIATION SAFETY Fuels, lubricants, or hydraulic fluids; flammable cements, rosins, sealants, paints and thinners; fluids under pressure; compressed gasses, including oxygen; batteries; aviation ordnance and pyrotechnics; electrical and electronic circuits; operating radio transmitters and radar systems; hazardous noise sources.	50
B. AIRFRAME STRUCTURES	
1. WOOD STRUCTURES Identify, inspect and repair wooden airframe components	16
2. AIRCRAFT COVERING Select and apply fabric and fiberglass covering materials; inspect, test, and repair fabric and fiberglass.	16
3. AIRCRAFT FINISHES Apply trim, letters, and touchup paint; identify and select aircraft finishing materials; apply finishing materials; inspect finishes and identify defects.	20
4. SHEET METAL AND NON-METALLIC STRUCTURES Select, install, and remove special fasteners for metallic, bonded, and composite structures; inspect bonded structures; inspect, test, and repair fiberglass, plastics, honeycomb, composite, and laminated primary and secondary structures; inspect, check, service, and repair windows, doors, and interior furnishings; inspect and repair sheet-metal structures; install conventional rivets, form, lay out, and bend sheet metal.	300
5. WELDING Weld magnesium and titanium; solder stainless steel; fabricate tubular structures; solder, braze, gas-, and arc-weld steel, weld aluminum and stainless steel.	100
6. ASSEMBLY AND RIGGING Rig rotary-wing aircraft; rig fixed-wing aircraft; check alignment of structures; assemble aircraft components, including flight control surfaces; balance, rig and inspect movable primary and secondary flight control surfaces; jack aircraft.	250
7. AIRFRAME INSPECTION Perform airframe conformity and airworthiness inspections.	100
C. AIRFRAME SYSTEMS AND COMPONENTS	
1. AIRCRAFT LANDING GEAR SYSTEMS Inspect, check, service and repair landing gear, retraction systems, shock struts, brakes, wheels, tires, and steering systems.	100
2. HYDRAULIC AND PNEUMATIC POWER SYSTEMS Repair hydraulic and pneumatic power system	100

components; identify and select hydraulic fluids; inspect, check, service, troubleshoot, and repair hydraulic and pneumatic power systems.	
3. CABIN ATMOSPHERE CONTROL SYSTEMS Inspect, check, troubleshoot, service, and repair heating, cooling, air conditioning, pressurization systems, and air cycle machine; inspect, check, troubleshoot, service, and repair heating, cooling, air-conditioning, and pressurization systems; inspect, check, troubleshoot, service and repair oxygen systems.	100
4. AIRCRAFT INSTRUMENT SYSTEMS Inspect, check, service and troubleshoot, electronic flight instrument systems and both mechanical and electrical heading, speed, altitude, temperature, pressure, and position indication systems to include the use of built-in test equipment; install instruments and perform a static pressure systems leak test.	200
5. COMMUNICATION AND NAVIGATION SYSTEMS Inspect, check, and troubleshoot autopilot, servos and approach coupling systems; inspect, check, and service aircraft electronic communication and navigation systems, including VHF, passenger address interphones and static discharge devices, aircraft VOR, ILS, LORAN, Radar beacon transponders, flight management computers and GPWS; inspect and repair antenna and electronic equipment installations.	350
6. AIRCRAFT FUEL SYSTEMS Check and service fuel dump systems; perform fuel management, transfer and defueling; inspect, check, and repair pressure-fueling systems; repair aircraft fuel system components; inspect and repair fluid quantity indicating systems; troubleshoot, service, and repair fluid pressure and temperature warning systems; inspect, check, service, troubleshoot, and repair aircraft fuel systems.	100
7. AIRCRAFT ELECTRICAL SYSTEMS Repair and inspect aircraft electrical system components; crimp and splice wiring to manufacture's specifications; and repair pins and sockets of aircraft connectors; install, check, and service airframe electrical wiring, controls, switches, indicators and protective devices; inspect, check, troubleshoot, service, and repair alternating and direct current electrical systems; inspect, check, and troubleshoot constant speed and integrated speed drive generators.	400
8. POSITION AND WARNING SYSTEMS Inspect, check, and service speed and configuration warning systems, electrical brake controls, and anti-skid systems; inspect, check, troubleshoot, and service landing gear position indicating and warning systems.	250
9. ICE AND RAIN CONTROL SYSTEMS Inspect, check, troubleshoot, service and repair airframe ice and rain control systems.	80
10. FIRE PROTECTION SYSTEMS Inspect, check, and service smoke and carbon monoxide detection systems; inspect, check, troubleshoot, and repair aircraft fire detection and extinguishing systems.	20

D. POWER PLANT THEORY		
1. RECIPROCATING ENGINES Inspect and repair a radial engine; overhaul reciprocating engine; inspect, check, service, and repair reciprocating engines and engine installations; install, troubleshoot, and remove reciprocating engine.		160
2. TURBINE ENGINE Overhaul turbine engine; inspect, check, service, and repair turbine engines and turbine engine installations; install, troubleshoot, and remove turbine engines.		160
3. ENGINE INSPECTION Perform power plant conformity and airworthiness inspections.		100
E. POWER PLANT SYSTEMS		
1. ENGINE INSTRUMENT SYSTEMS Troubleshoot, service, and repair electrical and mechanical fluid rate-of-flow indicating systems; inspect, check, service, troubleshoot, and repair electrical and mechanical engine temperature, pressure, and R.P.M indicating systems.		40
2. ENGINE FIRE PROTECTION SYSTEMS Inspect, check, service, troubleshoot, and repair engine fire detection and extinguishing systems.		10
3. ENGINE ELECTRICAL SYSTEMS Repair engine electrical system components; install, check, and service engine electrical wiring, controls, switches, indicators, and protective devices.		150
4. LUBRICATING SYSTEMS Identify and select lubricants; repair engine lubrication system components; inspect, check, service, troubleshoot, and repair engine lubrication systems.		24
5. IGNITION AND STARTING SYSTEMS Overhaul magneto and ignition harness; inspect, service, troubleshoot, and repair reciprocating and turbine engine ignition systems and components; inspect, service, troubleshoot, and repair turbine engine electrical starting systems; inspect, service, and troubleshoot turbine engine pneumatic starting systems.		100
6. FUEL METERING SYSTEM Troubleshoot and adjust turbine engine fuel metering systems and electronic engine fuel controls; overhaul carburetor; repair engine fuel metering system components; inspect, check, service, troubleshoot, and repair reciprocating and turbine engine fuel metering systems.		100
7. ENGINE FUEL SYSTEMS Repair engine fuel system components; inspect, check, service, troubleshoot, and repair engine fuel systems.		100
8. INDUCTION AND ENGINE AIRFLOW SYSTEMS Inspect, check, troubleshoot, service, and repair engine ice and rain control systems; inspect, check, troubleshoot, service, and repair heat exchangers, supercharger and turbine engine airflow and temperature control systems; inspect, check, service, and repair carburetor air intake and induction manifolds.		100

9. ENGINE COOLING SYSTEMS Repair engine cooling system components; inspect, check, troubleshoot, service, and repair engine-cooling systems.	48
10. ENGINE EXHAUST & REVERSER SYSTEMS Repair engine exhaust system components; inspect, check, troubleshoot, service, and repair engine exhaust systems; troubleshoot and repair engine thrust reverser systems and related components.	200
11. PROPELLERS Inspect, check, service, and repair propeller synchronizing and ice control systems; identify and select propeller lubricants; balance propellers; repair propeller control systems components; inspect, check, service, and repair fixed-pitch, constant-speed, and feathering propellers and propeller governing systems; install, troubleshoot, and remove propellers; repair aluminum alloy propeller blades.	100
12. TURBINE POWERED AUXILIARY POWER UNITS (APU) Inspect, check, service and troubleshoot turbine-driven auxiliary power units.	48
TOTAL	4,812

In licensed occupations apprentices must complete the minimum required total hours prior to being referred to the license examination. (OAR 839-011-0265(2)) (For electrical licenses, ORS 479.630 & OAR 918-282-0270) (For plumbing licenses, ORS 693.060 & OAR 918-695-0140)

Apprentices must complete a total of **4,812** hours of on-the-job training. However, the committee recognizes that most apprentices will not be able to fulfill the total amount of hours specified in every work process as set forth in this standard. When an apprentice is unable to fulfill the total work hours in each work process the committee will evaluate the apprentice's knowledge, skills and abilities and provide appropriate additional related instruction to assure that competency is acquired in each work process. The evaluation and summary of the additional instruction will be noted in the apprentice's file. (OAR 839-011-0265(1))

APPENDIX G: RELATED TRAINING

A minimum of **176** hours of related training is recommended during each year the apprentice is registered in the program. (ORS 660.126 (e) / ORS 660.157(1))

The following is a summary of related instruction including required class hours in each element of instruction. A committee may establish and submit clear objectives and outcomes in lieu of hours for each class subject. (ORS 660.157)

Related training must cover the following subjects and must be completed with a grade of 'C' or better for graded classes or 'Pass' for non-graded classes. (OAR 918-282-0170 to -0365)

Course	Hours
1. Human Factor & Risk Management Identify human conditions to minimize accidents in aviation.	8
2. Introduction to Aviation Familiarize apprentice with aviation terminology, materials and tools	8
3. Aircraft Hydraulic Systems Hydraulics System components and their common faults Associated safety precautions Hydraulic system schematics and fluid flow Hydraulic contamination Hydraulic Seals Stock number, part number, nomenclature, and manufacture date of seals Inspection of seals for defects, cuts, punctures, and abrasions Removal and installation of seals and backup rings Hydraulic Electrical Hydraulic system electrical schematics, current flow, and control circuitry	12
4. Landing Gear systems Landing gear system components and their function Landing gear system fluid flow Landing gear system current flow Sequence of electrical and mechanical events during landing gear system operation	4
5. Aircraft Brake Systems Types of aircraft brake systems and their distinguishing characteristics Brake system components and their function Aircraft brake systems safety precautions Sequence of mechanical, hydraulic, and electrical events for normal and emergency brake system operation Brake Anti Skid Anti skid system purpose Anti skid system components and their function Anti skid system operation	8
6. Aircraft Environmental Control Systems Air Cycle Air Condition System Air cycle air condition system components and operation Air cycle air condition system maintenance and safety	8

Vapor Cycle System Vapor cycle air conditioning system components and operation	
7. Aircraft Anti-ice/de-ice systems Bleed air anti-ice components and functions Electrical heat anti-ice components and functions Electrical heat de-ice components and functions Ant-ice and de-ice maintenance and safety	8
8. Aircraft Fire Protection Systems Detection components and schematics Detection and prevention system maintenance and safety	4
9. Aircraft Flotation Systems Flotation system diagrams and components Flotation system electrical/mechanical schematics Flotation system sequence of operations	4
10. Aircraft structural material identification and procedures	16
11. Repair/Identify damaged and broken Aircraft electrical wires, cables and connectors	12
12. Aircraft Electrical circuit test equipment and fault isolation Multimeter Measurements Digital and analog meter usage and operation Electrical circuit current Electrical circuit resistance	20
13. Aircraft Corrosion Control Corrosion types and terms Corrosion tools and procedures	8
14. Aircraft Structural Repair Rivet Joint Layout Single and multiple row patterns Procedures and formulas Material identification and application Pneumatic Riveting Rivet sizing and application Specifications, tolerances, and methods Removal and replacement of defective rivets Fasteners Identification: Turnlock fastener, Cherrymax rivet, Plate Nut, Hi-Lok, Pin rivet, Channel Nut Application: Hi-Lok, Pin rivet, Huckrimp, Blind rivet, Turnlock Replacement: Turnlock fastener, Cherrymax rivet, Plate Nut, Hi-Lok, Channel Nut Aircraft Construction Fixed wing major airframe sections and components Rotary wing major airframe sections and components Stresses Structural types and construction Fuselage structural members Wing rib types and structural components Fuselage and wing stations Basic Drawings Types Interpreting Standard lines Solid Rivet Identification	40

<ul style="list-style-type: none"> Part number identification Material identification Application Power Tools <ul style="list-style-type: none"> Proper utilization of drill press, pneumatic drill, and bench grinder Safety precautions and equipment Maintenance Sheet Metal Forming and Bending <ul style="list-style-type: none"> 90 degree bends Brake finger alignment/use Aircraft Skin Repair <ul style="list-style-type: none"> Structural damage evaluation Lap patch fabrication General damage repair types Scratch burnishing Crack repair Metal types Cut, Trim, Deburr, Burnish, and Chamfer metal/metal edges Filler tolerances Precision Measuring Instruments <ul style="list-style-type: none"> Vernier Caliper Outside and Depth Micrometers Cable Tensiometer Universal Propeller Protractor 	
<ul style="list-style-type: none"> 15. Composite Repair <ul style="list-style-type: none"> Scarf procedures Cutting fabric Mixing resin and catalyst Fabric lay-up sequence and orientation Material application 	8
<ul style="list-style-type: none"> 16. Non-destructive Inspection <ul style="list-style-type: none"> Cleaning Application and removal of penetrant, cleaner, and developer Black Light inspection Eddy Current set-up and use 	12
<ul style="list-style-type: none"> 17. Cable Fabrication 	4
<ul style="list-style-type: none"> 18. Aircraft Fuel Systems <ul style="list-style-type: none"> Safety precautions associated with fuel system maintenance Fuel system components and their function Fuel quantity system schematics, components and their functions Fuel system fuel flow Fuel system current flow and multiple fuel quantity indication 	8
<ul style="list-style-type: none"> 19. Helicopter Power train systems <ul style="list-style-type: none"> Rotary wing power train system components and their function Rotary wing power train main gearbox sections Main gearbox oil system components Rotor head components and their function 	12
<ul style="list-style-type: none"> 20. Aircraft propeller systems <ul style="list-style-type: none"> T56 Controls/Propellers C-130 engine control throttle positions and their corresponding definitions Temperature datrum system operation Powerplant and propeller operation when the Fire Emergency system is activated Assemblies and sections of a Hamilton Standard propeller Function of the propeller governor during over speed and under speed conditions 	8

Alpha and Beta ranges of propeller operation	
21. Aircraft powerplant systems	44
Basic Engines	
Basic engine major sections	
Axial and centrifugal flow compressors	
Accessory section components	
Turboprop, turboshaft, and turbofan engine distinguishing characteristics	
Auxiliary powerplants	
T56 Powerplant	
T56-A-15 sections	
T56-A-15 power section assemblies	
T56-A-15 compressor section	
Propeller brake functions	
Compressor stall avoidance system	
Oil system components and functions	
T700 Engines	
T700 basic modules	
T700 engine accessory module	
T700 engine inlet particle separator components and functions	
Operating parameters sensed by Hydromechanical Unit for fuel flow metering	
Hydromechanical Unit controlled components	
Digital Electronic Control Unit control parameters	
LTS101 Engines	
LTS101 modules	
Power turbine control anticipator system	
LTS101 compressor	
LTS101 engine airflow	
Accessory reduction gearbox module components	
Torque meter system	
Inlet airflow modulation system operation	
Gas producer speed and power turbine speed sensors	
Measured gas temperature thermocouples	
ATF3 Turbofan Engine	
ATF3 modules	
ATF3 compressors	
ATF3 internal components	
Normal and manual fuel scheduling	
Engine fuel flow control	
Permanent Magnet Generator	
Surge control components	
Engine Component Replacement	
Common hand tool usage	
Precision measuring equipment	
Safety locking devices	
Safety equipment and procedures	
Seal installation	
Hardware installation	
Corrosion inspection and preventive maintenance	
Aircraft Pressurization	
Aircraft pressurization components and operation	
Aircraft pressurization equipment maintenance and safety	
22. Flight control systems	12
23. Aircraft engine electrical/electronic controls	12
24. Math	44

25. Physics and aerodynamics	12
26. Basic electricity	44
27. FAR related/Tech publications	8
28. Avionics	44
Basic Aircraft systems.	
Navigation	
VOR	
DME	
ADF	
Marker Beacon	
GPS	
INS	
AHARS	
Landing Systems	
ILS/LOC	
Glide slope	
GPS	
MLS	
Radar Altimeter	
Communication	
VHF	
SELCAL	
HF	
ACARS	
Data Link	
ICS	
Surveillance	
Transponders	
Mode A	
Mode C	
Mode S	
TCAS 1 & 2	
EGPWS / TAWS	
Radar	
Air Data	
Pitot/Static	
Air Data Computers	
Altimeters Airspeed VSI indicators	
Altitude Alerter	
Autopilots	
FMS	
Flight Directors	
Indicators	
Annunciation	
RMI	
HSI	
ADI	
EFIS	
Electrical Buses	
AC	
DC	
Lights	
Landing Gear	
Equipment and furnishings	
Anti icing systems	
Engines	

Environmental Entertainment Aircraft wiring Systems Integration principles. Analog Digital Data Buses 232 429 Basic Electronics Ohms Law. Digital Logic AC Theory DC Theory Gyros Relays Syncros Servo Motors & Tach / Rate Generators Troubleshooting Avionics systems Aircraft systems Rotorywing / Helicopter considerations SAS Glass cockpits Installation considerations Technical documentation FAR AC TSO System Integration Annunciation Layout Wiring Structures Operations Forms and Records Restrictions and Licenses	
29. Blue Print Drawing	8
TOTAL	440
30. Optional Bonus Class: Test Preparation for FAA Certification	40

Methods of related/supplemental training shall consist of the following:

- A combination of home study and approved correspondence courses;
- Community college;

APPENDIX H: PROGRAM CONTACT INFORMATION

ADMINISTRATOR/COORDINATOR

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