Aviation, Maintenance Endorsement

Specifications, Competencies, & Requirements

PURPOSE

This endorsement is meant for certified teachers interested in teaching Aviation Technician courses. It is attached to a current Utah Educator License with a license area of concentration in **Secondary** or Career and Technical Education (**CTE**) Education.

Upon attachment of this endorsement to a Utah educator license, educators will be approved to teach approved USBE courses.

ENDORSEMENT TYPES

Prerequisite

Demonstrate an understanding of CTE basics.

- CTE Knowledge

Associate Level Requirements

Applicants must complete **THREE** of the following competency requirements. The associate-level endorsement is valid for up to three school years before it expires. Associate-level endorsements are non-renewable.

Associate-eligible competencies (choose any 3):

- Safety, Compliance & Professional Responsibility
- Tools, Measurement & Workmanship
- Materials, Hardware & Assembly Practices
- Systems Thinking & Troubleshooting
- Technical Documentation & Communication
- Inspection, Quality & Verification Practices
- CTSO & Career Readiness (Technician Pathways)

Professional Level Requirements

The applicant must meet **ALL** the competency areas listed above for the professional level.

COMPETENCY DETAILS & DESCRIPTIONS

Prerequisite

1. CTE Knowledge

Demonstrate an understanding of CTE basics:

- Explain how CTE links learning to specific Utah industries and what its main goals are.
- Know the licenses and endorsements needed to teach specific CTE courses.
- Describe how CTE is organized into clusters and pathways at the state, district (LEA), and school levels, and how this helps students succeed after graduation.
- Locate and use the state's strands and standards in lesson plans.

- Explore CTE student organizations (CTSOs) and professional groups and explain how they support students and teachers.
- Explain how advisory boards, with industry members, make sure programs meet job market needs and maintain safe learning environments.
- Understand the basics of securing funding, planning for the future of the program, and participating in the state Program of Quality Review (PQR) to ensure program excellence.

Select **one** of the following options:

- **USBE Course:** CTE Orientation
- **Complete THREE years of full-time CTE Teaching in Utah**
- **Currently hold a professional-level CTE endorsement**

Endorsement Competencies

2. Safety, Compliance, & Professional Responsibility

Demonstrate the ability to teach and model safe work practices in technician environments, including the use of personal protective equipment (PPE), hazard recognition, and adherence to standard operating procedures (SOPs). Emphasize risk awareness, accountability, and professional responsibility, including how safety practices, human factors, and compliance expectations support reliable and error-free outcomes in lab, shop, and industry contexts.

*Select **one** of the following options (evidence):*

- **Current FAA Basic Ground Instructor License**
- **Current FAA Advanced Ground Instructor License**
- **Current FAA Certified Flight Instructor License**
- **Current FAA Airframe & Powerplant License**
- **Current FAA Light Support Repairman Certificate (LSRM)**
- **USBE Microcredential**: Aviation Technician (in development)
- **Equivalent College Course:** Transcripts showing a passing grade in relevant course(s), and a course description covering the required competency skills.
- **Work Experience:** Minimum of 3 years of documented, directly related, full-time occupational experience in a technician environment (aviation maintenance, manufacturing, automotive, industrial maintenance, etc.) such that it demonstrates to USBE that you possess the depth of content knowledge required to meet all competencies outlined for courses authorized by this endorsement.

  Documentation Requirements (provide one or more):
  - A letter of recommendation or verification on company letterhead including detailed job duties related to safety practices and risk mitigation, dates of employment, and supervisor contact information.
  - Equivalent evidence demonstrating professional work related to safety procedures and safe shop practices.

3. Tools, Measurement & Workmanship

Demonstrate proficiency in the selection, use, and instruction of common hand tools and measurement instruments, including the application of precision, unit conversion, and tolerance awareness. Model proper tool handling, organization, and care, and reinforce workmanship

expectations such as accuracy, repeatability, and attention to detail in technician tasks across shared shop environments.

*Select **one** of the following options:*

- **Current FAA Airframe & Powerplant License**
- **Current FAA Light Support Repairman Certificate (LSRM)**
- **AMTG 1200 - Aircraft Maintenance Technician - Intro to Aviation Generals (SUU)**
- **USBE Microcredential**: Aviation Technician (in development)
- **Equivalent College Course:** Transcripts showing passing grade of relevant course(s), and course description covering the required competency skills.
- **Work Experience:** Minimum of 3 years of documented, directly related, full-time occupational experience demonstrating tool use, measurement, and torque discipline.
  Documentation Requirements (provide one or more):
  - Company letterhead verification including job duties related to tooling, measurement, and verification practices; dates; supervisor contact.
  - Equivalent evidence demonstrating professional work involving measurement and tooling practices.

4. Materials, Hardware, & Assembly Practices

Demonstrate materials handling, hardware selection, and assembly practices in technician environments. Teach identification, handling, and selection considerations for materials and fasteners, and reinforce safe, appropriate assembly techniques. Emphasize how material properties and hardware choices influence system performance, safety, and maintenance outcomes.

*Select **one** of the following options:*

- **Current FAA Airframe & Powerplant License**
- **Current FAA Light Support Repairman Certificate (LSRM)**
- **AV 1140 - Aircraft Components and Principles (USU)**
- **USBE Microcredential**: Aviation Technician (in development)
- **Equivalent College Course:** Transcripts showing a passing grade in the relevant course(s), and a course description covering the required competency skills.
- **Work Experience:** Minimum of 3 years of documented, directly related, full-time occupational experience demonstrating documentation discipline and professional work records.
  Documentation Requirements (provide one or more):
  - Company letterhead verification including job duties related to materials handling, hardware usage, assembly practices, and workmanship standards; dates; supervisor contact.
  - Equivalent evidence demonstrating professional work requiring accurate documentation and handoff communication.

5. Systems Thinking & Troubleshooting

Demonstrate the ability to teach systems thinking and structured problem-solving in technician contexts. Apply a systematic troubleshooting process (e.g., symptom → hypothesis → test → result → next steps) to analyze issues, evaluate evidence, and support logical decision-making. Incorporate system relationships, cause-and-effect reasoning, and real-world application within aviation or comparable technical systems.

*Select **one** of the following options:*

- **Current FAA Basic Ground Instructor License**
- **Current FAA Advanced Ground Instructor License**
- **Current FAA Certified Flight Instructor License**
- **Current FAA Airframe & Powerplant License**
- **Current FAA Light Support Repairman Certificate (LSRM)**
- **USBE Microcredential:** Aircraft Systems **or** Aviation Technician (in development)
- **AV 2170 – Aircraft Systems (Utah State University)**
- **Equivalent College Course:** Transcripts showing a passing grade in relevant course(s), and a course description covering the required competency skills.
- **Work Experience:** Minimum of 3 years of documented, directly related, full-time occupational experience demonstrating systems troubleshooting and problem-solving.
  Documentation Requirements: Company letterhead verification and/or equivalent evidence, consistent with the model.

6. Technical Documentation & Communication

Demonstrate proficiency in teaching documentation practices that support safety, quality, and accountability in technician environments. This includes task logs, checklists, and structured communication such as shift or task handoffs. Emphasize clarity, completeness, and professionalism in written and verbal communication, ensuring that work performed and observations are accurately recorded and effectively conveyed.

*Select **one** of the following options:*

- **Current FAA Basic Ground Instructor License**
- **Current FAA Advanced Ground Instructor License**
- **Current FAA Certified Flight Instructor License**
- **Current FAA Airframe & Powerplant License**
- **Current FAA Light Support Repairman Certificate (LSRM)**
- **USBE Microcredential:** Federal Aviation Regulations
- **AV 3420 - FAA Regulations, Records, and Certifications (USU)**
- **Equivalent College Course:** Transcripts showing a passing grade in the relevant course(s), and a course description covering the required competency skills.
- **Work Experience:** Minimum of 3 years of documented, directly related, full-time occupational experience demonstrating documentation practices, recordkeeping, and professional communication in technician environments.
  Documentation Requirements: Company letterhead verification and/or equivalent evidence, consistent with the model.

7. Inspection, Quality, & Verification Practices

Demonstrate the ability to teach inspection mindset and quality assurance practices, including recognizing nonconformities, verifying work against expected standards, and applying appropriate escalation procedures. Emphasize verification habits, cleanliness, organization, and attention to detail, as well as the role of human factors in error prevention and consistent, high-quality outcomes.

*Select **one** of the following options:*

- **Current FAA Airframe & Powerplant License**
- **Current FAA Light Support Repairman Certificate (LSRM)**
- **USBE Microcredential:** Aircraft Systems
- **AMTT 1220 -** Aircraft Systems I (SLCC)
- **Equivalent College Course:** Transcripts showing a passing grade in the relevant course(s), and a course description covering the required competency skills.
- **Work Experience:** Minimum of 3 years of documented, directly related, full-time occupational experience demonstrating inspection, verification, and quality practices in technician environments.
  Documentation Requirements: Company letterhead verification and/or equivalent evidence, consistent with the model.

8. CTSO & Career Readiness (Technician Pathways)

Demonstrate Career and Technical Student Organization (CTSO) knowledge, including advising students, managing events and administrative tasks, communicating with stakeholders, and supporting student success.

*Select **one** of the following options:*

- **Attend a CTSO Fall Leadership Conference:** Reflected on USBE Altitude transcripts.
- **USBE Course:** SkillsUSA Utah Advisor Training
- **USBE Microcredential:** Career & Technical Student Organizations