

SkillsUSA Tennessee PS Virtual Interview Contest Aviation Technician

SkillsUSA is focused on preparing students for career success. With the changes in our world, it is now more important than ever that you know not only how to interview for your future career, but how to do it in a virtual format.

Starting in summer 2020, SkillsUSA Tennessee Postsecondary is hosting statewide Virtual Interview Contests in all industry sectors!

Virtual Interview Contest Process:

Step #1: All chapters will receive “*How to Prepare for Virtual Interviews*” training packet created by the SkillsUSA Tennessee PS State Director

Step #2: Students practice virtual interviewing skills with their instructor. Create a professional resume geared towards the job description included. Participate in a virtual in-class competition to determine top 3 overall students in their program area.

Step #3 The top 3 students from each program submit their recorded virtual skills demonstration interviews and their professional resumes to the state director to be judged by industry professionals.

**Scenarios and detailed instructions are included in this packet*

Step #4 The Top 10 finalists from each sector will be notified of their scheduled time to interview in using *Microsoft Teams* with a panel of industry professionals from their sector. Interviews will be recorded, and once all are scored the overall winners will be awarded Gold, Silver, and Bronze medals.



Aircraft Mechanics and Service Technicians

Job Summary and Responsibilities:

Aircraft maintenance engineers make preflight and postflight inspections, adjustments, and minor repairs to ensure safe and sound performance of aircrafts. They inspect aircraft prior to takeoff to detect malfunctions such as oil leaks, electrical or hydraulic problems. They verify passenger and cargo distribution and amount of fuel to ensure that weight and balance specifications are met.

Required Competencies:

Occupational Competencies

- **Power tools:** Operate power driven pumps. Use hand tools or power tools. Use vehicle repair tools or safety equipment.
- **Testing equipment:** Use equipment to test performance and operation of machinery.
- **Technical communication skills:** Explain technical details to non-technical customers, stakeholders, or any other interested parties in a clear and concise manner.
- **Technical documentation:** Understand and use technical documentation in the overall technical process.
- **Airport planning:** Knowledge of know airport planning for different types of aircrafts; use that information to mobilize resources and people in order to handle the aircrafts while they are in the airport.
- **Engineering principles:** Experience with the engineering elements like functionality, replicability, and costs in relation to the design and how they are applied in the completion of engineering projects.
- **Aircraft flight control systems:** Familiarity with know the setting, features and operation of aircraft flight control systems. Manage flight control surfaces, cockpit controls, connections, and operating mechanisms required to control the flight direction of an aircraft. Operate aircraft engine controls in order to change aircraft speed.
- **Electromechanics:** Knowledge of the engineering processes that combine electrical and mechanical engineering in the application of electromechanics in devices that need electricity to create mechanical movement or devices that create electricity by mechanical movement.
- **Electrical engineering:** Experience with understand electrical engineering, a field of engineering that deals with the study and application of electricity, electronics, and electromagnetism.
- **Aircraft mechanics:** Familiarity with technicalities over mechanics in aircrafts and related topics in order to perform a wide range of repairs in aircrafts.
- **Technical drawings:** Knowledge of drawing software and the various symbols, perspectives, units of measurement, notation systems, visual styles and page layouts used in technical drawings.
- **Engineering processes:** Experience with the systematic approach to the development and maintenance of engineering systems.
- **Electronics:** Familiarity with the functioning of electronic circuit boards, processors, chips, and computer hardware and software, including programming and applications. Apply this knowledge to ensure electronic equipment runs smoothly.
- **Mechanical engineering:** Knowledge of discipline that applies principles of physics, engineering and materials science to design, analyze, manufacture and maintain mechanical systems.
- **Electricity:** Experience with understand the principles of electricity and electrical power circuits, as well as the associated risks.

- **Electrical wiring plans:** Familiarity with pictorial representation of an electrical circuit. It shows the components of the circuit as simplified shapes, and the power and signal connections between the devices. It gives information about the relative position and arrangement of devices and terminals on the devices, to help in building or servicing the device. A wiring diagram is often used to troubleshoot problems and to make sure that all the connections have been made and that everything is present.
- **Mechanics:** Knowledge of theoretical and practical applications of the science studying the action of displacements and forces on physical bodies to the development of machinery and mechanical devices.
- **Engine components:** Experience with know the different engine components, and their operation and maintenance. Understand when repairs and replacement should be undertaken.
- **Electrical systems used in transportation:** Understand the functioning of electrical systems, their specifications, and application in operations and systems for the transportation of freight and people.

Foundational Competencies

- **Equipment Maintenance:** Performing routine maintenance on equipment and determining when and what kind of maintenance is needed.
- **Repairing:** Repairing machines or systems using the needed tools.
- **Operation Monitoring:** Watching gauges, dials, or other indicators to make sure a machine is working properly.
- **Troubleshooting:** Determining causes of operating errors and deciding what to do about it.
- **Complex Problem Solving:** Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
- **Critical Thinking:** Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
- **Quality Control Analysis:** Conducting tests and inspections of products, services, or processes to evaluate quality or performance.
- **Reading Comprehension:** Understanding written sentences and paragraphs in work related documents.
- **Monitoring:** Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.
- **Operation and Control:** Controlling operations of equipment or systems.

Example Activities:

- Examine and inspect aircraft components, including landing gear, hydraulic systems, and deicers to locate cracks, breaks, leaks, or other problems.
- Conduct routine and special inspections as required by regulations.
- Inspect completed work to certify that maintenance meets standards and that aircraft are ready for operation.
- Read and interpret maintenance manuals, service bulletins, and other specifications to determine the feasibility and method of repairing or replacing malfunctioning or damaged components.
- Maintain repair logs, documenting all preventive and corrective aircraft maintenance.
- Modify aircraft structures, space vehicles, systems, or components, following drawings, schematics, charts, engineering orders, and technical publications.

- Inspect airframes for wear or other defects.
- Measure parts for wear, using precision instruments.

Pre-Recorded Skills Demonstration Scenario

Aviation Technician

For this portion of the virtual interview contest, you are to record yourself responding to the following scenario. You may choose to use props, but they are not required. You will be scored on your ability to communicate the process clearly, and to demonstrate your knowledge of the technical skill.

Scenario:

You work as an aviation technician at John Tune airport. A pilot, Jake, has asked you to inspect his plane. He tells you that when he was out practicing maneuvers that his engine began running rough after he got out of a climb and then he felt a little vibration.

Explain the diagnostics you will perform to determine the cause of the vibration as well as how you will communicate with Jake from intake of his plane, diagnostic results, and scheduling the repair.

**You have the freedom to determine the cause of the vibration for your recording*



Skills Demonstration Scenario	Possible Points	Points Earned	Notes
Professional Appearance/Grooming	5		
Virtual Setting: Backdrop, Lighting, Audio, Technical Quality, No Distractions	5		
Eye Contact/Body Language	5		
Demonstration of technical skill/knowledge	15		
Verbal communication skills/clarity	10		
Overall Impression	10		
Total	50		
Virtual Interview	Possible Points	Points Earned	Notes
Greeting and Introduction	5		
Professional Appearance/Grooming	5		
Eye Contact/Body Language	5		
Demonstration of knowledge of the position and technical skills required for the job	10		
Verbal Communication Skills/Clarity	5		
Presentation: Self-Confidence, Persuasiveness	5		
Preparation: Knowledge of Position Applied for and Personal History	5		
Overall Impression	10		
Total	50		
Resume	Possible Points	Points Earned	Notes
Personal Information: Name, address, phone & email	1		
Skills:	2		
Education: Include program of study/Major	2		
Employment: And/or volunteer work or list NA	1		
Activities, Awards and Honors: Should include SkillsUSA membership/activities	2		
References: Or references available upon request	1		
Spelling, Punctuation & Grammar	1		
Total	10		
More than One Page (-1pt)			