# HAND AND POWER TOOLS

## Course Syllabus

**Course Number:** TRGA-1108  
**OHLAP Credit:** No

**OCAS Code:** None  
**Course Length:** 35 Hours

**Career Cluster:** Transportation, Distribution & Logistics  
**Career Pathway:** Aviation Maintenance Technology  
**Career Major(s):** General Aviation

**Pre-requisite(s):**

The student will be shown the proper use of hand and power tools with emphasis on using safety equipment for personal safety protection.

**Textbooks:**


**Course Objectives:**

### A. Lesson: HAND TOOLS

1. State guidelines for care and safe use of hand tools.
2. Identify types of basic hand tools.
3. Discuss types of hand tools and their usage.
5. Identify basic types of torque wrenches.
6. Determine the force to be applied to the fastener by a torque wrench.

### B. Lesson: POWER TOOLS

1. State guidelines for care and safe operation of power tools.
2. Identify parts of a drill press, bench grinder, band saw, and disc grinder.
3. Discuss rules for safe use of power tools and shop equipment.
4. § Demonstrate proper use of power tools and shop equipment.
5. State guidelines for shop inspections.
6. Complete an accident report.

### C. Lesson: CUTTING TOOLS

1. Identify types of cutting tools.
2. Discuss types of cutting tools and their usage.
3. Discuss types, sizes of points, and uses of hole cutters, drill bits, and reamers.
4. Discuss types and uses of taps and dies.
5. Match descriptions of types of thread fits to their correct classes.
6. Interpret the National Taper Pipe Thread Size Chart.
7. § Fabricate a hardware block using hand and power tools.
### Teaching Methods:
The class will primarily be taught by the lecture and demonstration method and supported by various media materials to address various learning styles. There will be question and answer sessions over material covered in lecture and media presentations. Supervised lab time is provided for students to complete required projects.

### Grading Procedures:
1. Students are graded on theory and shop practice and performance.
2. Each course must be passed with seventy (70%) percent or better.
3. Grading scale: A=90-100%, B=80-89%, C=70-79%, F=0-69%.

### Description of Classroom, Laboratories, and Equipment:
Tulsa Technology Center campuses are owned and operated by Tulsa Technology Center School District No. 18. All programs provide students the opportunity to work with professionally certified instructors in modern, well-equipped facilities.

### Available Certifications/College Credit
The student may be eligible to take state, national or industry exam after completion of the program. College credit may be issued from Oklahoma State University-Okmulgee or Tulsa Community College. See program counselor for additional information.

### College Credit Eligibility:
The student must maintain a grade point average of 2.0 or better.