WEIGHT AND BALANCE
Course Syllabus

<table>
<thead>
<tr>
<th>Course Number:</th>
<th>TRGA-1104</th>
<th>OHLAP Credit:</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>OCAS Code:</td>
<td>None</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Course Length:</td>
<td>42 Hours</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Career Cluster:</td>
<td>Transportation, Distribution &amp; Logistics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Career Pathway:</td>
<td>Aviation Maintenance Technology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Career Major(s):</td>
<td>General Aviation</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Pre-requisite(s): The student prepares an aircraft for weighting, and performs calculation of aircraft weight, determine center of gravity and record weight and balance data.

Textbooks:
- Dale Crane, Dictionary of Aviation Terms, Aviation Supplies and Academics, 1997
- FAA, FAR Handbook for Aviation Maintenance Technicians, Jeppesen, Sanders, Inc.. 2001
- FAA, Standards for Aviation Maintenance Handbook, Jeppesen, Sanders, Inc.. 1985

Course Objectives:

A. Lesson: PREPARATION OF AIRCRAFT FOR WEIGHT AND BALANCE
1. Define terms associated with aircraft weight and balance. (Gen.C13)
2. Explain principles of weight and balance operations.
3. Discuss special limitations related to aircraft jacking and weight and balance.
4. State the condition of aircraft certified under FAR Part 23, during the weighing operation relative to ballast, fuel and operation.
5. Discuss documents and references necessary to perform weight and balance calculations. (Gen C14,C15)
6. Discuss safety precautions to follow when weighing an aircraft.
7. Discuss the effect weight and center of gravity position have on an aircraft's stall speed and stability.

B. Lesson: WEIGH AIRCRAFT
1. Determine the empty weight center of gravity relative to the main wheels of an aircraft. (Level 3) (App. B,C,12) (Gen.C1)
3. Calculate the center of gravity in extreme forward and aft loading conditions. (Level 3) (App. B,C,12) (Gen.C4,C6,C18,C19)
5. Determine when the installation of placards or ballast may be required due to CG placement.
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.