I. Course Number: AERM 1254

II. Course Title: Aircraft Composites

III. Instructional Time:

Semester ------ 2 hours
Lecture -------- 14 hours
Lab ------------ 56 hours
Final Test ----- 1 hour
Total Clock -- 71 hours

IV. Course Description:

A study of the inspection and repair of composite, fiberglass, honeycomb, and laminated structural materials including doors, windows, bonded structures, and interior furnishings.

V. Course Learning Outcomes:

Select, install, and remove special fasteners for bonded and composite structures; inspect bonded structures; inspect, test, and repair fiberglass, plastics, honeycombs, composite, and laminated primary and secondary structures; and inspect, check, service, and repair windows, doors, and interior furnishings.

VI. Program Objectives:

Level 2 A. Select, install, and remove special fasteners for bonded and composite structures.

Level 2 B. Inspect, test, and repair fiberglass, plastics, honeycomb, composite, and laminated primary and secondary structures.

Level 2 C. Inspect bonded structures.

Level 2 D. Inspect, check, service, and repair windows, doors, and interior furnishings.
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VII. Practical Projects:

A. Simulate selection and usage of special fasteners.
B. Simulate maintenance of non-metallic structures and components.
C. Simulate inspection of bonded structures.
D. Simulate maintenance of windows, doors, and furnishings.

VIII. Teaching Methods:

To include lecture, discussion, audio/visual aids, computer based training, hand outs, and reference materials.

IX. Evaluation:

Evaluation methods for this course are as follows:

A. Quizzes: Informal quizzes may be administered periodically to measure student progress and to identify significant learning problems. The quiz type (multiple choice, oral, essay, etc.) and the frequency of administration shall be at the discretion of the instructor. Quiz grades are not used in computing course grades.

B. Practical Projects and Mid-term Tests: At the completion of instruction of an objective, the student's performance will be evaluated by a knowledge test and/or a practical project. Mid-term tests grades are averaged with Practical Projects grades.

C. Final Examination: A final exam will be administered at the conclusion of the course and shall be comprehensive of the entire course.

D. Grading: A percentage grading system shall be used and the student's final grade shall be computed as follows:

| Practical Projects and Mid-term Test | 65% |
| Final Examination                   | 35% |
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E. Final percentage grades shall be converted to letter grades as follows:

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>90-100</td>
<td>A</td>
</tr>
<tr>
<td>80-89</td>
<td>B</td>
</tr>
<tr>
<td>70-79</td>
<td>C</td>
</tr>
<tr>
<td>60-69</td>
<td>D</td>
</tr>
<tr>
<td>59-0</td>
<td>F</td>
</tr>
</tbody>
</table>

X. Tools and Equipment:

Special tools and equipment required for this unit are to be furnished by Coastal Bend College. All hand tools, however, are to be furnished by the individual student and shall be immediately available to the student at the beginning of this course of instruction.

XI. Attendance Policy:

Refer to the Coastal Bend College Airframe & Power Technology Program attendance policy.

XII. Bibliography:

A. Required Text:

2. JS312624, Standard Aviation Maintenance Handbook, Jeppesen Sanderson, Inc.
3. JS312617, AC 43.13-1B/2A, Acceptable Methods, Techniques, and Practices, Aircraft Inspection and Repair, Department of Transportation, Federal Aviation Administration, Jeppesen Sanderson, Inc.

B. Supplementary Text:

4. JS312616, Federal Aviation Regulations Handbook for Aviation Maintenance Technicians, Jeppesen Sanderson, Inc.
7. JS312625, Aircraft Technical Dictionary, Jeppesen Sanderson, Inc.
8. Aircraft Manufacturers Specifications and/or Support Material.