Date: August 22, 2013
Revision: 000

COASTAL BEND COLLEGE
Airframe & Power Technology Program
Airframe Course Syllabus

I. Course Number: AERM 1347

II. Course Title: Airframe Auxiliary Systems

III. Instructional Time:
Semester ------ 3 hours
Lecture -------- 26 hours
Lab ---------- 39 hours
Final Test ----- 1 hour
Total Clock -- 66 hours

IV. Course Description:
Topics address airframe auxiliary systems including the operation and repair of position and warning systems, cabin atmospheric control systems, ice and rain control systems for aircraft and engines, and fire detection and protection systems.

V. Course Learning Outcomes:
Inspect, check, and service speed and configuration warning systems, electric brake controls, and anti-skid systems; inspect, check, troubleshoot, and service landing gear position indicating and warning systems; and inspect, check, troubleshoot, service, and repair heating, cooling, air conditioning, oxygen, and pressurization systems and air cycle machines. Inspect, check, troubleshoot, service and repair airframe ice and rain control systems; inspect, check, and service smoke and carbon monoxide detection systems; and inspect, check, troubleshoot, service, and repair aircraft fire detection and extinguishing systems.

VI. Program Objectives:
Level 2 A. Inspect, check, and service speed and configuration warning systems, electrical brake controls, and anti-skid systems.

Level 3 B. Inspect, check, troubleshoot, and service landing gear position indicating and warning systems.

Level 1 C. Inspect, check, troubleshoot, service, and repair heating, cooling, air conditioning, and pressurization systems.

Level 2 D. Inspect, check, troubleshoot, service, and repair oxygen systems.

Level 1 E. Inspect, check, troubleshoot, service, and repair heating, cooling, air conditioning, pressurization systems, and air cycle machines.

Level 2 F. Inspect, check, troubleshoot, service, and repair airframe ice and rain control systems.

Level 1 G. Inspect, check, and service smoke and carbon monoxide detection systems.

Level 3 H. Inspect, check, service, troubleshoot, and repair aircraft fire detection and extinguishing systems.

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VII. Practical Projects:

A. Simulate maintenance of speed and configuration warning systems, electrical brake controls, and anti-skid systems.

B. Perform maintenance of landing gear position indicating and warning systems.

C. Research maintenance of heating, cooling, air-conditioning, and pressurization systems for piston engine aircraft.

D. Simulate maintenance of oxygen systems.

E. Research maintenance of heating, cooling, air conditioning, and pressurization systems, and air cycle machines, for turbine engine aircraft.

F. Simulate maintenance of airframe ice and rain control systems.

G. Research maintenance of smoke and carbon monoxide detection systems.

H. Perform maintenance of aircraft fire detection and extinguishing systems.

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 students 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:

90-100	A
80-89	B
70-79	C
60-69	D
59-0	F

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:

1. JS312692, **A&P Technician Airframe Textbook**, Jeppesen Sanderson, Inc.

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.

5. JS312693, **A&P Technician Airframe Test Guide**, Jeppesen Sanderson, Inc.

6. JS322711, **A&P Technician Airframe Workbook**, Jeppesen Sanderson, Inc.

7. JS312625, **Aircraft Technical Dictionary**, Jeppesen Sanderson, Inc.

8. Aircraft Manufacturers Specifications and/or Support Material.