I. Course Number: AERM 2447

II. Course Title: Aircraft Reciprocating Engine Overhaul

III. Instructional Time:

  Semester ----- 4 hours
  Lecture ------ 26 hours
  Lab -------- 104 hours
  Final Test ---- 1 hour
  Total Clock -- 131 hours

IV. Course Description:

  A study of reciprocating engine overhaul including measurement and inspection procedures. Instruction in removal and installation, inspections, checks, servicing, and repair of engines.

V. Course Learning Outcomes:

  Remove and install an engine; inspect, check, service, and repair engines; use reference materials; use measurement instruments; and follow inspection techniques.

VI. Program Objectives:

  Level 2 A. Overhaul reciprocating engine.

  Level 3 B. Inspect, check, service, and repair reciprocating engines and engine installations.

  Level 3 C. Install, troubleshoot, and remove reciprocating engines.
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VII. Practical Projects:

A. Simulate reciprocating engine overhaul.

B. Perform maintenance on reciprocating engine and engine installations.

C. Perform reciprocating engine removal, troubleshooting, and installation.

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:

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Practical Projects and Mid-term Test</td>
<td>65%</td>
</tr>
<tr>
<td>Final Examination</td>
<td>35%</td>
</tr>
</tbody>
</table>

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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:


B. Supplementary Text:

6. Aircraft Manufacturers Specifications and/or Support Material.