

## Multi-Engine <br> Rating Course (AMEL) Flight Training Syllabus FAR Part 61

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# TECH AVIATION FLIGHT SCHOOL, INC. 

# MULTI-ENGINE RATING COURSE <br> AIRPLANE MULTI-ENGINE LAND (AMEL) FLIGHT TRAINING SYLLABUS 

## PRINT STUDENT NAME:



DATE (mm/dd/yyyy)

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## INTRODUCTION

The Multi-Engine Rating Course (Airplane) flight-training syllabus is designed to meet or exceeds the requirements of 14 CFR 61.65.

Its design will allow an enrolled appropriately rated Private or Commercial Pilot student to acquire the proficiency and experience needed to meet the certification requirements for adding a U.S. FAA Multi-Engine Rating (Airplane) to an existing Private or Commercial Pilot Certificate (ASEL). The performance criteria specified in the syllabus is based on the current FAA MultiEngine Pilot (AMEL) Practical Test Standards (PTS). All enrolled students of this course must meet these standards before graduating from this course.

This flight-training syllabus contains two (2) stages and includes sixteen separate lessons. Each lesson includes an objective and a completion standard. Each completion standard must be met in its entirety before that lesson may be considered complete. The individual lesson and stage times indicated are not mandatory and are included for flight instructor and student guidance only. However, before graduation from the course, a student must meet the following minimum training hours:

| Dual Flight <br> Training Multi-Engine |
| :---: |
| 15.0 |

Additional training requirements that must also be accomplished before graduation are included, as appropriate, in the Flight Training syllabus and the Multi-Engine Rating Ground Training Syllabus.

Within each stage, lesson sequences may be adjusted as necessary to accommodate training continuity problems. This is permitted as long as training objectives are not compromised.

The flight instructor will assign a grade "S"(Satisfactory), "U"(Unsatisfactory), or " I "(Incomplete) to each element within a lesson and an " S ", "U", or " I " for the overall lesson grade. Dual lessons should be preceded and followed by pre-flight (pre) and post-flight (post) briefings. Although 14 CFR Part 61 does not specify a minimum number of hours for pre and post briefings, the amount of briefing time accomplished must be sufficient to ensure that the student understands the lesson objectives and completion standards for each lesson.

Every lesson contains an outline and detailed sequence of elements that the student must successfully complete. Normally, a lesson is expected to be satisfactory completed within the recommended time. However, if a student is unable to master the lesson in that time, it will be necessary to repeat those elements graded "I" or "U" until those lesson elements meet the lesson completion standards and are graded " S ".

At the end of each stage of training a stage check has been included to check the student's progress. Each stage check must be accomplished satisfactorily before the student may continue training in the next stage. The final lesson of the flight-training syllabus is the stage check/end-ofcourse test. This lesson is designed to ensure that the student has acquired the aeronautical knowledge and flight skills required by the current FAA Commercial Pilot (ASEL) Practical Test Standards (PTS).

## TRAINING SYLLABUS

I. ENROLLMENT PREREQUISITES: To enroll in the Multi-Engine Rating Course (Airplane), the applicant must hold a current private or commercial pilot certificate with a single-engine land aircraft category and class rating prior to beginning the flight portion of the course.
II. GROUND TRAINING REQUIREMENTS: The applicant must successfully complete all required ground training lessons including the Final Stage Check.
III. FLIGHT TRAINING REQUIREMENTS: The applicant must successfully complete all flight training lessons, stage checks, and end of course tests.
IV. REQUIREMENTS FOR GRADUATION: To obtain a graduation certificate for the Multi-Engine Rating Course (AMEL), the applicant must:
a. Hold at least a current private pilot certificate with an airplane single-engine land category and class rating;
b. Be able to read, speak, write, and understand the English language;
c. Complete all ground training requirements;
d. Complete all flight training requirements; and
e. Hold a valid FAA medical certificate.

## GRADING CRITERIA

## FOR THE STUDENT AND INSTRUCTOR:

I. The overall performance grade for each lesson completed is based on the knowledge, preparation, skill, attitude, and judgment of the student.
II. The standards to be used in the end of course tests will be at least those listed in the appropriate FAA Private/Commercial Pilot (AMEL) Practical Test Standards.

The student should be evaluated on performance, both in academic ability as well as flying ability. A lesson is not complete until the instructor is satisfied that the student's performance meets the completion standards in all areas, and awards the student a grade of Satisfactory (S) on each element within the lesson, and a grade of $70 \%$ or higher or Satisfactory (S) on the entire lesson.

## FLIGHT TRAINING WORKSHEETS

| $\begin{gathered} \text { LESSON } \\ \# \end{gathered}$ | DATE | A/C | ACT. TTL | GRADE | DUAL | $\begin{gathered} \hline \text { X-C } \\ \text { DUAL } \end{gathered}$ | IFR | FTD | GRD | $\begin{gathered} \text { REC. } \\ \text { TLL } \end{gathered}$ | $\begin{gathered} \text { FLT } \\ \text { STG } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| MULTI-ENGINE STAGE I |  |  |  |  |  |  |  |  |  |  |  |
| 601 |  |  |  |  |  |  |  |  | 2.0 |  |  |
| 602 |  |  |  |  |  |  |  |  | 2.0 |  |  |
| 603 |  |  |  |  | 1.0 |  |  |  |  | 1.0 |  |
| 604 |  |  |  |  |  |  |  |  | 2.0 |  |  |
| 605 |  |  |  |  | 1.5 |  |  |  |  | 1.5 |  |
| 606 |  |  |  |  |  |  |  |  | 2.0 |  |  |
| 607 |  |  |  |  |  |  |  |  | 1.0 |  |  |
| 608 |  |  |  |  | 1.5 |  |  |  |  | 1.5 |  |
| 609 |  |  |  |  | 2.0 | 2.0 |  |  |  | 2.0 |  |
| 610 |  |  |  |  | 1.5 |  |  |  |  | 1.5 |  |
| 611 |  |  |  |  | 1.5 |  |  |  | 1.0 | 1.5 |  |
| STAGE I TOTAL: |  |  |  |  | 9.0 | 2.0 | 0.0 | 0.0 | 10.0 | 9.0 | 0.0 |
| MULTI-ENGINE STAGE II |  |  |  |  |  |  |  |  |  |  |  |
| 612 |  |  |  |  |  |  |  |  | 2.0 |  |  |
| 613 |  |  |  |  | 1.5 |  | 1.3 |  |  | 1.5 |  |
| 614 |  |  |  |  | 1.5 |  | 0.5 |  | 1.0 | 1.5 |  |
| 615 |  |  |  |  | 1.5 |  | 0.5 |  | 1.0 | 1.5 |  |
| 616 |  |  |  |  | 1.5 |  | 0.5 |  | 1.0 | 1.5 |  |
| STAGE II TOTAL: |  |  |  |  | 6.0 | 0.0 | 2.8 | 0.0 | 5.0 | 6.0 | 0.0 |
| STAGE I+II TOTAL: |  |  |  |  | 15.0 | 2.0 | 2.8 | 0.0 | 15.0 | 15.0 | 0.0 |

$\sqrt{ } \quad$ Stage Check

- Course Completion Check

NOTE: All lessons indicating FTD (Flight Training Device) may also be completed in an appropriate aircraft.

ADDITIONAL FLIGHT TRAINING WORKSHEET: INCOMPLETE, ADD-TIME, STUDENT REQUESTED, ETC...

| LESSON \# | DATE | AIRCRAFT \# | TIME FLOWN | GROUND TIME | GRADE |
| :---: | :---: | :---: | :---: | :---: | :---: |
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## STAGE I

## STAGE OBJECTIVE

During this stage, the student will learn multiengine aerodynamics, operational procedures, systems, and performance considerations. The student will learn to compute weight and balance data accurately and to control the weight and balance conditions of the multiengine airplane. In addition, the student will learn to analyze multiengine performance factors and derive accurate values from multiengine charts. Also, the student will learn the principles, techniques, and procedures which apply to engine-out aerodynamics in the multiengine airplane.

## STAGE COMPLETION STANDARDS

To complete this stage, the student must satisfactorily complete both a knowledge and a flight test. The knowledge test must be passed with a minimum score of $70 \%$. The incorrect answers on the knowledge test must be reviewed in order to ensure complete understanding.

DATE: $\qquad$ GRADE: $\qquad$
( $0-99 \%, \overline{\mathrm{U}, \mathrm{S}, \text { or I) }}$
AIRCRAFT MODEL: $\qquad$ N $\qquad$

| FLIGHT TIME |  |  |  |  |  |  |  | X-C | GROUND LESSON | \#601 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Dual | Xual | IFR | FTD | GRD | Total |  |  |  |  |
| Recommended <br> This Lesson <br> Previous Lesson |  |  |  |  | 2.0 |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| New Total |  |  |  |  |  |  |  |  |  |  |
| Recomm. Total |  |  |  |  |  |  |  |  |  |  |

## LESSON OBJECTIVE:

During this ground lesson, the student will learn about multiengine airplane systems.

| Subject | Grade | Subject | Grade |
| :---: | :---: | :---: | :---: |
| Introduce |  |  |  |
| Operation of Systems |  |  |  |
| - Primary flight controls and trim |  |  |  |
| - Flaps, leading edge devices and spoilers |  |  |  |
| - Powerplant and propeller |  |  |  |
| - Landing gear system |  |  |  |
| - Fuel, oil, and hydraulic systems |  |  |  |
| - Electrical system |  |  |  |
| - Avionics system |  |  |  |
| - Pitot-Static system, vacuum/pressure system and associated flight instruments |  |  |  |
| Post Ground Discussion |  |  |  |

## COMPLETION STANDARDS:

At the completion of this ground lesson, the student should have a basic understanding of the general systems of this multiengine airplane.

## REMARKS:

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DATE: $\qquad$ 1 GRADE: $\qquad$
(0-99\%, U, S, or I)
AIRCRAFT MODEL: $\qquad$ N $\qquad$

| FLIGHT TIME |  |  |  |  |  |  |  | Xual | X-C <br> Dual | IFR | FTD | GRD | Total |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Dual |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  | 2.0 |  |  |  |  |  |  |  |  |
| Recommended <br> This Lesson <br> Previous Lesson |  |  |  |  |  |  |  |  |  |  |  |  |  |
| New Total |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Recomm. Total |  |  |  |  |  |  |  |  |  |  |  |  |  |

## LESSON OBJECTIVE:

During this lesson, the student will learn about preflight procedures and the operation of a multiengine airplane under normal conditions.

| LESSON CONTENT |  |  |  |
| :---: | :---: | :---: | :---: |
| Subject | Grade | Subject | Grade |
| Introduce / Oral Briefing <br> Preflight Procedures <br> - Performance and Limitations (Multiengine) <br> - Weight and balance <br> - Passenger Briefing <br> - Preflight Inspection <br> - Cockpit Management <br> - Engine Starting <br> Taxiing <br> - Before Takeoff Check <br> Discussion of Normal Procedures <br> - Airport Operations <br> - Takeoff, Landing and go-arounds <br> Performance Maneuvers <br> - Steep Turns <br> Slow Flight and Stalls <br> Post-Flight Procedures |  |  |  |

## COMPLETION STANDARDS:

At the completion of this lesson, the student should demonstrate through oral quizzing a basic understanding of the operation of a multiengine airplane under normal conditions.

REMARKS: $\qquad$
$\qquad$


DATE: $\qquad$ 1

GRADE: $\qquad$
AIRCRAFT MODEL: $\qquad$ N
(0-99\%, U, S, or I)

| FLIGHT TIME | FLIGHT LESSON |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Dual | X-C <br> Dual | IFR | FTD | GRD | Total |  |
| Recommended <br> This Lesson <br> Previous Lesson | 1.0 |  |  |  |  | 1.0 |  |
|  |  |  |  |  |  |  |  |
| New Total |  |  |  |  |  |  |  |
| Recomm. Total | 1.0 |  |  |  |  |  |  |

## LESSON OBJECTIVE:

During this flight lesson, the student will become acquainted with the training airplane.
Additionally, the student will learn the attitudes, power settings, and configurations required for the performance of the listed maneuvers and procedures.

| LESSON CONTENT |  |  |  |
| :---: | :---: | :---: | :---: |
| Subject | Grade | Subject | Grade |
| Preflight Discussion Review <br> Performance and Limitations (Multiengine) Normal Procedures <br> Introduce <br> Preflight Procedures <br> - Preflight Inspection <br> - Cockpit Management <br> - Engine Starting <br> - Taxiing <br> - Before Takeoff Check <br> Normal and Crosswind Takeoffs and Climbs <br> Cruise Flight and Four Fundamentals <br> Slow Flight <br> Normal and Crosswind Approaches andLandings Traffic Patterns |  | Postflight Procedures <br> Post Flight Discussion |  |

## COMPLETION STANDARDS:

At the completion of this lesson, the student should be able to perform the listed ground and flight operations with minimal instructor assistance. The student should also demonstrate the knowledge of attitudes, power settings, and configurations necessary to perform the listed maneuvers and procedures

## REMARKS:

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$\qquad$


DATE: $\qquad$ 1

GRADE: $\qquad$
(0-99\%, U, S, or I)
AIRCRAFT MODEL: $\qquad$ N $\qquad$

| FLIGHT TIME |  |  |  |  |  |  |  | Xual | X-C <br> Dual | IFR | FTD | GRD | Total |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Dual |  |  |  |  |  |  |  |  |  |  |  |  |
| Recommended <br> This Lesson <br> Previous Lesson |  |  |  |  | 2.0 |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| New Total |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Recomm. Total | 1.0 |  |  |  |  |  |  |  |  |  |  |  |  |

## LESSON OBJECTIVE:

During this ground lesson, the student will learn about advanced airplane systems, minimum equipment lists and airplane logbooks.

| LESSON CONTENT |  |  |  |
| :---: | :---: | :---: | :---: |
| Subject | Grade | Subject | Grade |
| Introduce <br> Operation of Airplane Systems <br> - Environmental system <br> - Deicing and anti-icing systems <br> - Turbocharger <br> - Minimum Equipment List <br> Airplane Logbooks <br> High Altitude Operations <br> Supplemental Oxygen <br> Post Ground Discussion |  |  |  |

## COMPLETION STANDARDS:

At the completion of this lesson, the student should demonstrate through oral quizzing a basic understanding of the operation of complex multiengine systems and how to use minimum equipment lists and airplane logbooks.

REMARKS: $\qquad$
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DATE: $\qquad$ 1

GRADE:
(0-99\%, U, S, or I)

## AIRCRAFT MODEL:

$\qquad$ N $\qquad$

| FLIGHT TIME |  |  |  |  |  |  |  | X-C |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Dual | XIG <br> Dual | IFR | FTD | GRD | Total |  |  |
| Recommended <br> This Lesson <br> Previous Lesson | 1.5 |  |  |  |  | 1.5 |  |  |
|  |  |  |  |  |  |  |  |  |
| New Total |  |  |  |  |  |  |  |  |
| Recomm. Total | 2.5 |  |  |  |  |  |  |  |

## LESSON OBJECTIVE:

During this flight lesson, the student will review normal procedures and be introduced to stalls, spin awareness and short field takeoffs and landings.

| LESSON CONTENT |  |  |  |
| :---: | :---: | :---: | :---: |
| Subject | Grade | Subject | Grade |
| Preflight Discussion Review <br> Preflight Procedures <br> - Preflight Inspection <br> - Cockpit Management <br> - Engine Starting <br> - Taxiing <br> - Before Takeoff Check <br> Normal and Crosswind Takeoffs and Climbs <br> Cruise Flight and Four Fundamentals <br> Drag Changes for Various Configurations <br> Normal and Crosswind Approaches and Landings <br> Traffic Patterns <br> Postflight Procedures |  | Introduce <br> Short-field takeoff and climb <br> Short-field approach and landing <br> Spin Awareness <br> Power off Stalls <br> Power on Stalls <br> Post Flight Discussion |  |

## COMPLETION STANDARDS:

At the completion of this lesson, the student should be able to perform all listed maneuvers and procedures with minimal instructor assistance.

## REMARKS:

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Stur Signt
Instructor Signature
Print Name

DATE: $\qquad$ 1 GRADE: $\qquad$
(0-99\%, U, S, or I)
AIRCRAFT MODEL: $\qquad$ N $\qquad$

| FLIGHT TIME | GROUND LESSON |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Dual | X-C <br> Dual | IFR | FTD | GRD | Total |  |
| Recommended <br> This Lesson <br> Previous Lesson |  |  |  |  | 2.0 |  |  |
|  |  |  |  |  |  |  |  |
| New Total |  |  |  |  |  |  |  |
| Recomm. Total | 2.5 |  |  |  |  |  |  |

## LESSON OBJECTIVE:

During this ground lesson, the student will learn emergency operations and multiengine aerodynamics.

| LESSON CONTENT |  |  |  |
| :---: | :---: | :---: | :---: |
| Subject | Grade | Subject | Grade |
| Introduce <br> Emergerncy Operations <br> - Emergency descent <br> - Manuevering with one engine inoperative <br> - Engine inoperative loss of directional control <br> - Engine failure during takeoff before Vmc <br> - Engine failure after lift-off (simulated) <br> - Approach and landing with an inoperative engine (simulated) <br> - Systems and equipment malfunctions <br> - Emergency equipment and survival gear <br> Multiengine aerodynamics <br> - Vmc <br> - Principles of flight - engine inoperative <br> - Critical Engine <br> Post Ground Discussion |  |  |  |

## COMPLETION STANDARDS:

At the completion of this lesson, the student should demonstrate through oral quizzing a basic understanding of multiengine emergency operations and aerodynamics.

## REMARKS:

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DATE: $\qquad$ 1 GRADE: $\qquad$
(0-99\%, U, S, or I)
AIRCRAFT MODEL: $\qquad$ N $\qquad$

| FLIGHT TIME | X-C | GROUND LESSON |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Dual | X <br> Dual | IFR | FTD | GRD | Total |
| Recommended <br> This Lesson <br> Previous Lesson |  |  |  |  | 1.0 |  |
|  |  |  |  |  |  |  |
| New Total |  |  |  |  |  |  |
| Recomm. Total | 2.5 |  |  |  |  |  |

## LESSON OBJECTIVE:

This review and testing session evaluates the student's comprehension of the material presented in Stage I.

| LESSON CONTENT |  |  |  |
| :---: | :---: | :---: | :---: |
| Subject | Grade | Subject | Grade |
| Review <br> All subject areas from previous ground lessons in this stage Knowledge Test |  |  |  |

## COMPLETION STANDARDS:

The student shall complete the Multiengine Pilot Written Examination with a minimum passing score of $70 \%$. The instructor shall review each incorrect response to ensure complete understanding of all subject areas. The grade for this lesson shall reflect the student's actual test score on the knowledge test.
REMARKS: $\qquad$
$\qquad$
$\qquad$

DATE: $\qquad$ 1 1 GRADE:
( $0-99 \%, \overline{\mathrm{U}, \mathrm{S}, \text { or I) }}$
AIRCRAFT MODEL: $\qquad$ N $\qquad$

| FLIGHT TIME |  |  |  |  |  |  |  |  | X-C | FIGHT LESSON |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Dual | X- <br> Dual | IFR | FTD | GRD | Total |  |  |  |  |
| Recommended <br> This Lesson <br> Previous Lesson | 1.5 |  |  |  |  | 1.5 |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| New Total |  |  |  |  |  |  |  |  |  |  |
| Recomm. Total | 4.0 |  |  |  |  |  |  |  |  |  |

## LESSON OBJECTIVE:

During this flight lesson, the student will be introduced to one engine inoperative procedures. The student will learn to identify the inoperative engine, initiate appropriate corrective procedures and maneuver the airplane with one engine inoperative. The student will also be introduced to the engine inoperative loss of directional control task and flight principles engine inoperative maneuver.

| LESSON CONTENT |  |  |  |
| :---: | :---: | :---: | :---: |
| Subject | Grade | Subject | Grade |
| $\quad$$\quad$ Preflight Discussion <br> Review  <br> Multiengine Operations <br> Performance and Limitations <br> Operation of Systems |  | Introduce <br> Emergency operations <br> - Manuevering with one engine inoperative (in cruise flight) <br> - Engine inoperative-loss of directional control <br> - Engine failure during takeoff before Vmc (below $50 \%$ Vmc) <br> - Engine failure after lift-off (simulated above 500 feet) <br> - Approach and landing with an inoperative engine (simulated) <br> - Flight principles engine inoperative (in flight) <br> - One engine shut down <br> - Emergency descent <br> Post Flight Discussion |  |

## COMPLETION STANDARDS:

At the completion of this lesson, the student should be able to identify the inoperative engine and use the correct inputs to maintain straight flight. The student shall have a complete and accurate knowledge of the cause, effect, and significance of engine-out minimum control speed and recognize the imminent loss of control.
NOTE: all engine inoperative loss of directional control demonstrations shall be completed no lower than 4,000' AGL. REMARKS:
$\qquad$


DATE: $\qquad$ 1

GRADE:
(0-99\%, U, S, or I)
AIRCRAFT MODEL: $\qquad$ N $\qquad$

| FLIGHT TIME | FLIGHT LESSON |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Dual | X-C <br> Dual | IFR | FTD | GRD | Total |  |  |
| Recommended <br> This Lesson <br> Previous Lesson | 2.0 | 2.0 |  |  |  | 2.0 |  |  |
|  |  |  |  |  |  |  |  |  |
| New Total |  |  |  |  |  |  |  |  |
| Recomm. Total | 6.0 | 2.0 |  |  |  |  |  |  |

## LESSON OBJECTIVE:

During this day VFR dual cross-country flight lesson, the student develops cross-country proficiency and confidence in a multiengine airplane. The flight will include a landing at a point more than 100 NM from the original point of departure. The student will also practice normal maneuvers.

| LESSON CONTENT |  |  |  |
| :---: | :---: | :---: | :---: |
| Subject | Grade | Subject | Grade |
| Preflight Discussion Practice <br> Preflight Planning <br> - Obtaining and assessing current weather info. <br> - Completing performance calculations <br> - Determining route and altitude <br> - Filing flight plan <br> Dead reckoning <br> Pilotage <br> Diversion <br> Performance of groundspeed and ETA calc. <br> VOR and ADF navigation <br> Completing cross-country log <br> Short field takeoff and landing |  | Use of apprpriate checklists VFR cross-country, >100NM Route: <br> Landings at: <br> Secondary route: <br> Landings at: <br> Post Flight Discussion |  |

COMPLETION STANDARDS:
The student shall demonstrate skill in cross-country planning by selecting optimum cruising altitudes and appropriate checkpoints for a flight with a landing at a point more than 100 NM from the original point of departure. Additionally, the student shall verify position, altitude, heading and arrival times at the en-route checkpoints within the parameters as specified in the current FAA Private or Commercial Pilot (AMEL) Practical Test Standards as appropriate. This lesson satisfies the requirements of 14 CFR Part 141 Appendix D (4) (b) (2) (iii).
REMARKS: $\qquad$

[^1]
## Instructor Signature

$\qquad$

DATE: $\qquad$ GRADE:
(0-99\%, U, S, or I)
AIRCRAFT MODEL: $\qquad$ N $\qquad$

| FLIGHT TIME | X-C | FLIGHT LESSON |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Dual | X <br> Dual | IFR | NIGHT | GRD | Total |
| Recommended <br> This Lesson <br> Previous Lesson | 1.5 |  |  |  |  | 1.5 |
|  |  |  |  |  |  |  |
| New Total |  |  |  |  |  |  |
| Recomm. Total | 7.5 | 2.0 |  |  |  |  |

## LESSON OBJECTIVE:

During this flight lesson, the student will review all areas of operation and procedures in preparation for the Stage one Check.

| LESSON CONTENT |  |  |  |
| :---: | :---: | :---: | :---: |
| Subject | Grade | Subject | Grade |
|  |  |  |  |
| Preflight Discussion (Oral) <br> PREFLIGHT PREPARATION <br> - Certificates and Documents <br> Performance and Limitations <br> - Principles of Flight - Engine Inoperative <br> - Operation of Systems <br> Flight Evaluation <br> PREFLIGHT PROCEDURES <br> - Preflight Inspection <br> - Cockpit Management <br> - Engine Starting <br> - Taxiing <br> - Before Takeoff Checks <br> AIRPORT OPERATIONS <br> - Traffic Patterns <br> TAKEOFFS, LANDINGS AND GO- <br> AROUNDS <br> - Normal and Crosswind Takeoffs and Climb <br> - Normal and Crosswind App and Landing <br> - Short-Field Takeoff and Climb <br> - Short-Field Approach and Landing <br> - Go-Around <br> PERFORMANCE MANUEVER <br> - Steep Turns |  | SLOW FLIGHT AND STALLS <br> - Manuevering During Slow Flight <br> - Power-On Stalls <br> - Power-Off Stalls <br> - Spin Awareness <br> EMERGENCY OPERATIONS <br> - Emergency Descent <br> - Manuevering with One Engine Inoperative <br> - Engine Inoperative Loss of DiR. Control Demonstration <br> - Engine Failure on Takeoff Befroe Vmc (Below 50\% Vmc) <br> - Engine Failure After Lift-Off (simulated) <br> - Approach and Landing with an Inoperative Engine (Simulated) <br> - Systems and Equipment Malfunctions <br> - Emergency Equipment and Survival Gear MULTIENGINE OPERATIONS <br> - Engine Failure During Flight <br> POSTFLIGHT PROCEDURES <br> - After Landing <br> - Parking and Securing |  |

COMPLETION STANDARDS:
At the completion of this lesson, the student should be able to perform all the listed maneuvers and procedures with minimal instructor assistance.

## REMARKS:

$\qquad$

DATE: $\qquad$ 1 GRADE:
(0-99\%, U, S, or I)
AIRCRAFT MODEL: $\qquad$ $\mathbf{N}$ $\qquad$

| FLIGHT TIME | STAGE 1 CHECK |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Dual | X-C <br> Dual | IFR | NIGHT | GRD | Total |
| Recommended <br> This Lesson <br> Previous Lesson | 1.5 |  |  |  | 1.0 | 1.5 |
|  |  |  |  |  |  |  |
| New Total |  |  |  |  |  |  |
| Recomm. Total | 9.0 | 2.0 |  |  |  |  |

## LESSON OBJECTIVE:

This stage check conducted by the chief or assistant chief flight instructor, will determine that the student meets the proficiency requirements for a multiengine land class rating limited to VFR only.

| LESSON CONTENT |  |  |  |
| :---: | :---: | :---: | :---: |
| Subject | Grade | Subject | Grade |
| Preflight Discussion (Oral) |  | SLOW FLIGHT AND STALLS |  |
| PREFLIGHT PREPARATION |  | - Manuevering During Slow Flight |  |
| - Certificates and Documents |  | - Power-On Stalls |  |
| Performance and Limitations |  | - Power-Off Stalls |  |
| - Principles of Flight - Engine Inoperative |  | - Spin Awareness |  |
| - Operation of Systems |  | EMERGENCY OPERATIONS |  |
| Flight Evaluation |  | - Emergency Descent |  |
| PREFLIGHT PROCEDURES |  | - Manuevering with One Engine Inoperative |  |
| - Preflight Inspection |  | - Engine Inoperative Loss of DiR. Control |  |
| - Cockpit Management |  | Demonstration |  |
| - Engine Starting |  | - Engine Failure on Takeoff Befroe Vmc |  |
| - Taxiing |  | (Below 50\% Vmc) |  |
| - Before Takeoff Checks |  | - Engine Failure After Lift-Off (simulated) |  |
| AIRPORT OPERATIONS |  | - Approach and Landing with an Inoperative |  |
| - Traffic Patterns |  | Engine (Simulated) |  |
| TAKEOFFS, LANDINGS AND GO-AROUNDS |  | - Systems and Equipment Malfunctions |  |
| - Normal and Crosswind Takeoffs and Climb |  | - Emergency Equipment and Survival Gear |  |
| - Normal and Crosswind App and Landing |  | MULTIENGINE OPERATIONS |  |
| - Short-Field Takeoff and Climb |  | - Engine Failure During Flight |  |
| - Short-Field Approach and Landing |  | POSTFLIGHT PROCEDURES |  |
| - Go-Around |  | - After Landing |  |
| PERFORMANCE MANUEVER <br> - Steep Turns |  | - Parking and Securing |  |

Continued on next page

## TECH AVIATION FLIGHT SCHOOL, INC.

## COMPLETION STANDARDS:

At the completion of this lesson, the student shall perform each of the listed areas of operation and tasks at a proficiency level that meets or exceeds those criteria outlined in the current FAA Private or Commercial Pilot (AMEL) Practical Test Standards.

NOTE: These requirements complete the course (except for the final course completion check) for a student that does not hold an instrument rating (airplane), or holds an instrument rating (airplane) but elects to be limited to VFR only in the multiengine airplane.

The student who is instrument rated and elects to have instrument privileges in the multiengine airplane will proceed to Stage II upon completion of this stage check.

## REMARKS:



# TECH AVIATION FLIGHT SCHOOL, INC. 

## STAGE II

## Stage Objective

During this stage, the student will review IFR procedures and will be introduced to multiengine instrument procedures. The student will also learn how to handle engine-out emergencies while only using reference to instruments.

## Stage Completion Standards

At the completion of this stage, the student shall perform each of the listed areas of operation and tasks at a proficiency level that meets or exceeds those criteria outlined in the current FAA Private or Commercial Pilot (AMEL) Practical Test Standards, as applicable.

DATE: $\qquad$ 1 GRADE: $\qquad$
AIRCRAFT MODEL: $\qquad$ N
(0-99\%, U, S, or I)

| FLIGHT TIME | FLIGHT LESSON |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Dual | X-C <br> Dual | IFR | NIGHT | GRD | Total |  |
| Recommended <br> This Lesson <br> Previous Lesson |  |  |  |  | 2.0 |  |  |
|  |  |  |  |  |  |  |  |
| New Total |  |  |  |  |  |  |  |
| Recomm. Total | 9.0 | 2.0 |  |  |  |  |  |

## LESSON OBJECTIVE:

During this ground lesson, the student will review IFR procedures and learn about multiengine IFR planning and operations.

| LESSON CONTENT |  |  |  |
| :---: | :---: | :---: | :---: |
| Subject | Grade | Subject | Grade |
| Review <br> Instrument Approach Procedures Instrument Navigation IFR Communications Use of Checklists <br> Introduce/Oral Briefing <br> Multiengine Operations DurinG Inst Flight <br> - Instrument Approach - All Engines Operating <br> - Engine Failure During Flight <br> - Instrument Approach - one engine inop <br> Post Ground Discussion |  |  |  |

## COMPLETION STANDARDS:

At the completion of this ground lesson the student should have a complete understanding of IFR procedures for the multiengine airplane.

## REMARKS:

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DATE: $\qquad$ 1 GRADE: $\qquad$
AIRCRAFT MODEL: $\qquad$ N
(0-99\%, U, S, or I)

| FLIGHT TIME |  |  | FLIGHT LESSON \#613 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Dual | $\begin{aligned} & \hline \text { X-C } \\ & \text { Dual } \end{aligned}$ | IFR | NIGHT | GRD | Total |
| Recommended | 1.5 |  | 1.3 |  |  | 1.5 |
| This Lesson |  |  |  |  |  |  |
| Previous Lesson |  |  |  |  |  |  |
| New Total |  |  |  |  |  |  |
| Recomm. Total | 10.5 | 2.0 | 1.3 |  | 12.0 | 10.5 |

## LESSON OBJECTIVE:

During this flight lesson, the student will practice basic attitude instrument flight and instrument approaches under normal conditions and during single engine operations.

| LESSON CONTENT |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Subject | Grade | Subject |  | Grade |
| Preflight Procedures Review <br> Basic Attitude Instrument Flight <br> Engine Failures <br> - During Straight and Level <br> - During Turns <br> - During Climbs <br> - During Descents <br> - Engine Shutdown and Feathering Instrument Approach - All Engines Operating <br> - ILS Approach <br> - VOR Approach <br> - NDB Approach <br> Instrument Approach - One Engine Inoperative <br> - ILS Approach <br> - VOR Approach <br> - NDB Approach |  |  | Post Flight Discussion |  |

## COMPLETION STANDARDS:

At the completion of this lesson, the student shall demonstrate instrument proficiency at the level of an instrument rated pilot. During engine-out operations, the student shall readily identify the inoperative engine, shut-down ad feather the appropriate engine using the appropriate procedures and checklists.
REMARKS: $\qquad$
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$\qquad$
$\qquad$
$\qquad$

DATE: $\qquad$ 1 $\qquad$ GRADE:
(0-99\%, U, S, or I)

## AIRCRAFT MODEL:

$\qquad$ N $\qquad$

| FLIGHT TIME | X-C | FLIGHT LESSON |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Dual | Xual <br> Dual | IFR | NIGHT | GRD | Total |
| Recommended <br> This Lesson <br> Previous Lesson | 1.5 |  | 0.5 |  | 1.0 | 1.5 |
|  |  |  |  |  |  |  |
| New Total |  |  |  |  |  |  |
| Recomm. Total | 12.0 | 2.0 | 1.8 |  |  | 13.0 |

## LESSON OBJECTIVE:

During this lesson, the student will review all maneuvers for the final stage check.


## Continued on next page

## TECH AVIATION FLIGHT SCHOOL, INC.

Multi-Engine Rating Course-AMEL
Flight Training Syllabus

## COMPLETION STANDARDS:

At the completion of this lesson, the student shall be able to perform all listed maneuvers and procedures without instructor assistance. The student shall also meet or exceed the current FAA Private or Commercial Pilot (AMEL) Practical Test Standards, as applicable.

## REMARKS:

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DATE: $\qquad$ 1 GRADE:
(0-99\%, U, S, or I)
AIRCRAFT MODEL: $\qquad$ $\mathbf{N}$ $\qquad$

| FLIGHT TIME | FLIGHT LESSON |  |  |  |  |  |  | \#615 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Dual | X-C <br> Dual | IFR | NIGHT | GRD | Total |  |  |
| Recommended <br> This Lesson <br> Previous Lesson | 1.5 |  | 0.5 |  | 1.0 | 1.5 |  |  |
|  |  |  |  |  |  |  |  |  |
| New Total |  |  |  |  |  |  |  |  |
| Recomm. Total | 13.5 | 2.0 | 2.3 |  | 14.0 | 13.5 |  |  |

## LESSON OBJECTIVE:

During this lesson, the flight instructor will determine that the student meets the proficiency requirements for a private or commercial multiengine land class rating for VFR and IFR.

| LESSON CONTENT |  |  |  |
| :---: | :---: | :---: | :---: |
| Subject | Grade | Subject | Grade |
| Oral <br> PREFLIGHT PREPARATION <br> - Performance And Limitations <br> - Principles of Flight - Engine Inoperative <br> - Operation Of Systems <br> Flight Evaluation <br> PREFLIGHT PROCEDURES <br> - Preflight Inspection <br> - Cockpit Management <br> - Engine Starting <br> - Taxiing <br> - Before Takeoff Check <br> AIRPORT OPERATIONS <br> - Traffic Patterns <br> T/O'S, LANDINGS, AND GO-AROUNDS <br> - Normal and Crosswind Takeoffs and Climb <br> - Normal and Crosswind App and Landing <br> - Short-Field Takeoff and Climb <br> - Short-Field Approach and Landing <br> -Go-Around <br> PERFORMANCE MANUEVER <br> - Steep Turns <br> SLOW FLIGHT AND STALLS <br> - Manuevering During Slow Flight <br> - Power-On Stalls <br> - Power-Off Stalls <br> - Spin Awareness |  | EMERGENCY OPERATIONS <br> - Emergency Descent <br> - Manuevering with One Engine Inoperatie <br> - Engine Inoperative - Loss of Directional Control Demonstration <br> - Engine Failure on Takeoff Before Vmc (below $50 \% \mathrm{Vmc}$ ) <br> - Engine Failure After Lift-Off (Simulated) <br> - Approach and Landing with an Inoperative Engine (Simulated) <br> - Systems and Equipment Malfunctions <br> - Emergency Equipment and Survival Gear <br> MULTIENGINE OPERATIONS <br> - Engine Failure During Flight <br> (By Reference to Instruments) <br> - Inst Approach - All Engines Operating <br> - Inst Approach - One Engine Inoperative <br> POSTFLIGHT PROCEDURES <br> - After Landing <br> - Parking and Securing |  |

# TECH AVIATION FLIGHT SCHOOL, INC. 

Multi-Engine Rating Course-AMEL
Flight Training Syllabus

## COMPLETION STANDARDS:

The student shall perform each of the listed areas of operation and tasks at a proficiency level that meets or exceeds those criteria outlines in the current FAA Private or Commercial Pilot (AMEL) Practical Test Standards, as applicable.

REMARKS: $\qquad$

DATE: $\qquad$ 1 1

GRADE:
(0-99\%, U, S, or I)
AIRCRAFT MODEL: $\qquad$ $\mathbf{N}$ $\qquad$

| End-Of-Course-Check |  |  |  |  |  |  |  | FLIGHT LESSON | \#616 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Dual | X-C <br> Dual | IFR | NIGHT | GRD | Total |  |  |  |
| Recommended <br> This Lesson <br> Previous Lesson | 1.5 |  | 0.5 |  | 1.0 | 1.5 |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| New Total |  |  |  |  |  |  |  |  |  |
| Recomm. Total | 15.0 | 2.0 | 2.8 |  | 15.0 | 15.0 |  |  |  |

## LESSON OBJECTIVE:

During this End-of-Course Check, the chief or assistant chief flight instructor wil determine that the student meets the requirements of the current FAA Private or Commercial Pilot (AMEL) Practical Test Standards (PTS), as applicable.

| LESSON CONTENT |  |  |  |
| :---: | :---: | :---: | :---: |
| Subject | Grade | Subject <br> EMERGENCY OPERATIONS <br> - Emergency Descent <br> - Manuevering with One Engine Inoperatie <br> - Engine Inoperative - Loss of Directional Control Demonstration <br> - Engine Failure on Takeoff Before Vmc (below 50\% Vmc) <br> - Engine Failure After Lift-Off (Simulated) <br> - Approach and Landing with an Inoperative Engine (Simulated) <br> - Systems and Equipment Malfunctions <br> - Emergency Equipment and Survival Gear MULTIENGINE OPERATIONS <br> - Engine Failure During Flight (By Reference to Instruments) <br> - Inst Approach - All Engines Operating <br> - Inst Approach - One Engine Inoperative <br> POSTFLIGHT PROCEDURES <br> - After Landing <br> - Parking and Securing | Grade |
| Oral <br> PREFLIGHT PREPARATION <br> - Performance And Limitations <br> - Principles of Flight - Engine Inoperative <br> - Operation Of Systems <br> Flight Evaluation <br> PREFLIGHT PROCEDURES <br> - Preflight Inspection <br> - Cockpit Management <br> - Engine Starting <br> - Taxiing <br> - Before Takeoff Check <br> AIRPORT OPERATIONS <br> - Traffic Patterns <br> T/O'S, LANDINGS, AND GO-AROUNDS <br> - Normal and Crosswind Takeoffs and Climb <br> - Normal and Crosswind App and Landing <br> - Short-Field Takeoff and Climb <br> - Short-Field Approach and Landing <br> -Go-Around <br> PERFORMANCE MANUEVER <br> - Steep Turns <br> SLOW FLIGHT AND STALLS <br> - Manuevering During Slow Flight <br> - Power-On Stalls <br> - Power-Off Stalls <br> - Spin Awareness |  |  |  |
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## TECH AVIATION FLIGHT SCHOOL, INC.

## COMPLETION STANDARDS:

The student shall perform each of the listed areas of operation and tasks at a proficiency level that meets or exceeds those criteria outlined in the current FAA Private or Commercial Pilot (AMEL) Practical Test Standards, as applicable.

NOTE: Those applicants not requesting instrument privileges in the multiengine airplane need not complete the instrument maneuvers.

## REMARKS:

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$\qquad$
$\overline{\text { Instructor Signature }}$


[^0]:    Student Signature

[^1]:    Student Signature

