

STUDENT INFORMATION		
Name	_____	_____
	LAST	FIRST MIDDLE
Address	_____	
City	State	ZIP
Telephone	_____	_____
	MOBILE	HOME WORK
Email	_____	
Pilot Cert.	_____	_____
	TYPE	CERT # DATE ISSUED
Emergency Contact	_____	
Phone	Relationship	_____

ENROLLMENT INFORMATION	
Course Title	_____
Enrollment Date	_____
Medical Certificate	_____
	CLASS DATE ISSUED
Remarks	_____
Pre-Training U.S. Citizenship Confirmation or TSA Alien Flight Training Requirements Completed with Records Date _____ Type _____ Inst. Int. _____	
(Note: The record on this page only serves as a reminder to complete the citizenship evaluation. It does not meet the requirements of the TSA for documentation.)	

STAGE CHECK COMPLETION RECORD		
Date	Stage	Ck Pilot
_____	_____	_____

COMPLETION INFORMATION		
Completion	Transfer	Terminated
_____	_____	_____
	DATE	DATE DATE
Records Certified Correct	_____	
	CHIEF INSTRUCTOR	
Remarks	_____	

ADDITIONAL AIRCRAFT CLASS RATING COURSE - AIRPLANE MULTIENGINE LAND

GROUND AND FLIGHT TRAINING SYLLABUS

COURSE PHILOSOPHY

The multiengine rating is not a basic level course of instruction. It is an advanced rating. Students of the program must be prepared and treat this as an advanced course of instruction. To this end, the prerequisites for the course must be met in order to complete the program as prescribed. Failure to meet and live up to the prerequisites will slow the training and lead to time and cost overruns.

COURSE PREREQUISITES

The student must meet the following prerequisites before enrolling in this course.

- Must hold a pilot certificate with an Airplane Single-Engine Land (ASEL) rating having Private or Commercial privileges.
- Must hold a pilot certificate with an Instrument Airplane (IA) rating if seeking instrument privileges for Airplane Multiengine Land (AMEL).
- Must be current *and proficient* on ASEL procedures, knowledge, and skills including PTS flight maneuvers and instrument operations for applicants seeking instrument privileges. Additional training may be required if initial evaluation shows this proficiency or understanding to be lacking.
- Must complete the pre-training study package supplied with this course.
- Must have at least rote memorization of the procedures for all multiengine training maneuvers as defined in the study materials.

COURSE OBJECTIVES

The student will obtain the aeronautical skill and experience necessary to meet the requirements for an Airplane Multiengine Land class rating at the same certificate level as currently held.

COURSE COMPLETION STANDARDS

The student must demonstrate through flight tests and school records that the aeronautical skill and experience requirements necessary to obtain an Airplane Multiengine Land class rating are met.

Note: All references to instrument flight found in lesson objectives, content, and completion standards apply only to those individuals holding an instrument rating and seeking instrument privileges. Visual pilots may skip these items.

COURSE TIME ALLOCATION TABLE

Stage	Lesson	Dual Flight	Dual FTD	Instrument	Discussion
I	1				1.5
I	2	1.2		0.3	0.5
I	3				1.5
I	4	1.3		0.3	0.3
I	5				1.5
I	6		1.5		0.3
I	7	1.5		0.8	0.3
I	8	1.5		0.8	0.3
I	9				1.5
I	10	1.5		0.5	0.3
Stage I Check	11	1.5		0.5	1.5
Stage I Totals		8.5	1.5	3.2	9.5
Course Totals		8.5	1.5	3.2	9.5

LESSON 1
DUAL – GROUND

DATE _____ GRADE (Circle One) S U I
STUDENT NAME _____ STUDENT SIGNATURE _____
INSTRUCTOR # _____ INSTRUCTOR SIGNATURE _____
DISCUSSION: (1.5) _____
TOTAL IN COURSE: (F/D) _____ / _____

LESSON OBJECTIVE:

During this lesson, the instructor will introduce the student to the training aircraft, including checklist usage, the AFM/POH, and instrument procedures in a multiengine airplane.

CONTENT:

Lesson Introduction

- _____ Aircraft – General
- _____ Primary Flight Controls and Trim
- _____ Multiengine Operations
- _____ Operation of Avionics Systems Unique to Training Airplane
- _____ Pilot Operating Handbook (POH)
- _____ Training Aircraft V-Speeds
- _____ Weight and Balance
- _____ Performance and Limitations
- _____ Checklist Usage

Lesson Introduction

- _____ Preflight Procedures
- _____ Landing Gear Operations
- _____ Flap System Operations
- _____ Maneuvers and Procedures with Two Engines
- _____ IFR En Route Procedures – Multiengine (ME)
- _____ Non-Precision Approaches – ME
- _____ Precision Approaches – ME
- _____ Missed Approach – ME

COMPLETION STANDARDS:

At the completion of this lesson, the student will demonstrate through oral discussion, a basic knowledge of the training aircraft and multiengine instrument procedures.

REQUIRED STUDY:

FAA-H-8083-3-AFH – Airplane Flying Handbook
AFM/POH – Airplane Flight Manual / Pilot's Operating Handbook
Sporty's What You Should Know series DVD/Video/App *So You Want to Fly Twins* (SYWTFT) - Chapters 5, 7, 13

<p>Notes:</p> <hr/> <hr/> <hr/> <hr/> <hr/>
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LESSON 2
DUAL – AIRPLANE

DATE _____	ACFT ID _____	GRADE (Circle One) S U I	
STUDENT NAME _____		STUDENT SIGNATURE _____	
INSTRUCTOR # _____		INSTRUCTOR SIGNATURE _____	
FLIGHT TIME: (1.2) _____		DISCUSSION: (0.5) _____	
INSTRUMENT: (0.3) _____		TOTAL IN COURSE: (F/D) _____ / _____	

LESSON OBJECTIVE:

During this lesson, the instructor will introduce the student to multiengine airplane operations, including starting, takeoff and landing, and basic maneuvering under visual flight rules. An instrument approach will be introduced during the return to the airport but will be abandoned at a sufficient distance to allow a stabilized approach and landing.

CONTENT:

Lesson Introduction

- _____ Preflight Ground Evaluation of Student's Understanding of Procedures to be Covered in the Airplane
- _____ Preflight Inspection
- _____ Cockpit Management
- _____ Operation of Avionics Systems Unique to Training Airplane
- _____ Engine Starting
- _____ Taxiing
- _____ Before Takeoff Checks
- _____ Departure and Arrival Briefing
- _____ Normal and/or Crosswind Takeoff and Climb
- _____ Propeller Synchronization

Lesson Introduction

- _____ Medium Turns
- _____ Steep Turns
- _____ Aircraft Systems Operations
- _____ Maneuvering during Slow Flight
- _____ Power-Off Stalls
- _____ Power-On Stalls
- _____ Accelerated Stalls
- _____ Traffic Pattern Operations
- _____ Non-Precision Approach – ME
- _____ Normal and/or Crosswind Approach and Landing
- _____ After Landing
- _____ Parking and Securing

COMPLETION STANDARDS:

At the completion of this lesson, the student will demonstrate a basic knowledge of multiengine operations.

REQUIRED STUDY:

- FAA-H-8083-3-AFH
- FAA-S-8081-14-PPTS – Private Pilot Practical Test Standards or
- FAA-S-8081-12-CPTS – Commercial Pilot Practical Test Standards (as applicable)
- AFM/POH
- SYWTFT - Chapters 1-5, 7

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LESSON 3
DUAL – GROUND

DATE _____	GRADE (Circle One) S U I
STUDENT NAME _____	STUDENT SIGNATURE _____
INSTRUCTOR # _____	INSTRUCTOR SIGNATURE _____
DISCUSSION: (1.5) _____	
TOTAL IN COURSE: (F/D) _____ / _____	

LESSON OBJECTIVE:

During this lesson, the instructor will introduce the student to multiengine aircraft performance on one and two engines. Additional training maneuvers will also be covered.

CONTENT:

Lesson Introduction

- _____ Aerodynamics with Two Engines
- _____ Part 23 Certification
- _____ Aircraft Performance Charts
- _____ Accelerate-Stop / Accelerate-Go
- _____ Spin Awareness
- _____ Critical Engine Considerations
- _____ Principles of Flight with One Engine Inoperative
- _____ Performance Considerations with One Engine Inoperative
- _____ Emergency Checklist – Crossfeed Operations
- _____ Maneuvers and Procedures with One Engine Inoperative

COMPLETION STANDARDS:

At the completion of this lesson, the student will demonstrate through oral discussion, knowledge and understanding of aircraft performance on one and two engines.

REQUIRED STUDY:

- FAA-H-8083-3-AFH
- AFM/POH
- SYWTFT - Chapters 8, 9

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LESSON 5
DUAL – GROUND

DATE _____	GRADE (Circle One) S U I
STUDENT NAME _____	STUDENT SIGNATURE _____
INSTRUCTOR # _____	INSTRUCTOR SIGNATURE _____
DISCUSSION: (1.5) _____	
TOTAL IN COURSE: (F/D) _____ / _____	

LESSON OBJECTIVE:

During this lesson, the instructor will introduce the student to engine failures and emergencies. Instrument procedures on a single engine will also be covered.

CONTENT:

Lesson Introduction

- _____ Emergency Checklist Usage
- _____ Emergency Approach and Landing
- _____ Engine Failure Procedures on the Ground before V_{MC}
- _____ Engine Failure Procedures in Cruise Flight – Visual Reference (VR)
- _____ Engine Failure Procedures after Takeoff
- _____ Single-Engine Approach and Landing
- _____ Go-Around from a Rejected Landing – SE
- _____ Engine Failure Procedures during Cruise Flight – Instrument Reference (IR)

Lesson Introduction

- _____ IFR En Route Procedures – SE
- _____ Non-Precision Approaches – SE
- _____ Precision Approaches – SE
- _____ Missed Approach – SE
- _____ Emergency Equipment and Survival Gear
- _____ Systems Malfunctions
- _____ Emergency Descent
- _____ Hot Starts
- _____ Emergency Landing Gear Extension

COMPLETION STANDARDS:

At the completion of this lesson, the student will demonstrate through oral discussion, knowledge and understanding of engine failures, emergencies, and single engine instrument procedures.

REQUIRED STUDY:

FAA-H-8083-3-AFH
AFM/POH
SYWTFT - Chapters 11, 14

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LESSON 6
DUAL – FTD

DATE_____ FTD ID_____ GRADE (Circle One) S U I
STUDENT NAME _____ STUDENT SIGNATURE_____
INSTRUCTOR # _____ INSTRUCTOR SIGNATURE_____
FTD: (1.5) _____ DISCUSSION: (0.3) _____
TOTAL IN COURSE: (F/D) _____ / _____

LESSON OBJECTIVE:

During this ground trainer based lesson, the instructor will introduce the student to emergencies and additional instrument approach procedures in a multiengine airplane.

CONTENT:

Lesson Introduction

- _____ Engine Failure Procedures on the Ground before V_{MC}
- _____ Engine Failure Procedures during Cruise Flight – VR
- _____ Engine Failure Procedures after Takeoff
- _____ Normal and/or Crosswind Approach and Landing – SE
- _____ Go-Around from a Rejected Landing – SE
- _____ Dual Engine Failure Procedures
- _____ Systems Malfunctions
- _____ Emergency Descent

Lesson Introduction

- _____ Precision Approaches – ME
- _____ Missed Approach – ME
- _____ Landing from an Instrument Approach – ME
- _____ Engine Failure Procedures during Cruise Flight – IR
- _____ IFR En Route Procedures – SE
- _____ Non-Precision Approaches – SE
- _____ Precision Approaches – SE
- _____ Missed Approach – SE
- _____ Landing from an Instrument Approach – SE

COMPLETION STANDARDS:

At the completion of this lesson, the student will demonstrate competence in basic multiengine operations.

REQUIRED STUDY:

FAA-H-8083-3-AFH
AFM/POH
SYWTFT - Chapters 11, 13-14

<p>Notes:</p> <hr/> <hr/> <hr/> <hr/> <hr/>
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LESSON 7
DUAL – AIRPLANE

DATE _____ ACFT ID _____ GRADE (Circle One) S U I
STUDENT NAME _____ STUDENT SIGNATURE _____
INSTRUCTOR # _____ INSTRUCTOR SIGNATURE _____
FLIGHT TIME: (1.5) _____ DISCUSSION: (0.3) _____
INSTRUMENT: (0.8) _____ TOTAL IN COURSE: (F/D) _____ / _____

LESSON OBJECTIVE:

During this lesson, the instructor will introduce the student to additional procedures in a multiengine airplane, including instrument operations on both engines and a single engine and engine failure procedures under visual and instrument conditions.

CONTENT:

Lesson Review

- _____ Before Takeoff Checks
- _____ Departure and Arrival Briefing
- _____ Normal and/or Crosswind Takeoff and Climb
- _____ Short-Field Takeoff and Climb
- _____ Steep Turns
- _____ Aircraft Systems Operations
- _____ Single-Engine Operations
- _____ Four Fundamentals – SE
- _____ Fuel Crossfeed Operations
- _____ V_{MC} Demonstration
- _____ Traffic Pattern Procedures
- _____ Go-Around from a Rejected Landing
- _____ Missed Approach – ME
- _____ Normal and/or Crosswind Approach and Landing
- _____ Short-Field Approach and Landing

Lesson Introduction

- _____ Preflight Ground Evaluation of Student's Understanding of Procedures to be Covered in the Airplane
- _____ Precision Approaches – ME
- _____ Landing from an Instrument Approach – ME
- _____ Engine Failure Procedures during Cruise Flight – VR
- _____ Engine Failure Procedures during Cruise Flight – IR
- _____ IFR En Route Procedures – Simulated SE
- _____ Non-Precision Approaches – Simulated SE
- _____ Normal and/or Crosswind Approach and Landing – Simulated SE

COMPLETION STANDARDS:

At the completion of this lesson, the student will demonstrate competence in basic multiengine operations.

REQUIRED STUDY:

FAA-H-8083-3-AFH
AFM/POH
SYWTFT - Chapter 13

<p>Notes:</p> <hr/> <hr/> <hr/> <hr/> <hr/>
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LESSON 8
DUAL – AIRPLANE

DATE _____ ACFT ID _____ GRADE (Circle One) S U I
STUDENT NAME _____ STUDENT SIGNATURE _____
INSTRUCTOR # _____ INSTRUCTOR SIGNATURE _____
FLIGHT TIME: (1.5) _____ DISCUSSION: (0.3) _____
INSTRUMENT: (0.3) _____ TOTAL IN COURSE: (F/D) _____ / _____

LESSON OBJECTIVE:

During this lesson, the instructor will introduce the student to additional single-engine procedures in a multiengine airplane, including engine failures before and after takeoff under visual flight rules, additional emergency instrument operations, and other emergency procedures.

CONTENT:

Lesson Review

- _____ Short-Field Takeoff and Climb
- _____ Normal and/or Crosswind Takeoff and Climb
- _____ Aircraft Systems Operations
- _____ Engine Failure Procedures during Cruise Flight
- _____ Single-Engine Operations
- _____ Non-Precision Approaches – Simulated SE
- _____ Short-Field Approach and Landing
- _____ Normal and/or Crosswind Approach and Landing – Simulated SE

Lesson Introduction

- _____ Preflight Ground Evaluation of Student's Understanding of Procedures to be Covered in the Airplane
- _____ Engine Failure Procedures after Takeoff (Simulated)
- _____ Engine Failure Procedures on the Ground before V_{MC}
- _____ Precision Approaches – Simulated SE
- _____ Missed Approach – Simulated SE
- _____ Landing from an Instrument Approach – Simulated SE
- _____ Go-Around from a Rejected Landing – Simulated SE
- _____ Systems Malfunctions
- _____ Emergency Descent
- _____ No or Partial Flap Approach and Landing
- _____ Emergency Landing Gear Extension

COMPLETION STANDARDS:

At the completion of this lesson, the student will demonstrate competence in basic multiengine operations.

REQUIRED STUDY:

FAA-H-8083-3-AFH
AFM/POH
SYWTFT - Chapter 14

<p>Notes:</p> <hr/> <hr/> <hr/> <hr/> <hr/>
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LESSON 9
DUAL – GROUND

DATE _____ GRADE (Circle One) S U I
STUDENT NAME _____ STUDENT SIGNATURE _____
INSTRUCTOR # _____ INSTRUCTOR SIGNATURE _____
DISCUSSION: (1.5) _____
TOTAL IN COURSE: (F/D) _____ / _____

LESSON OBJECTIVE:

During this lesson, the instructor will introduce the student to the training aircraft's equipment and systems.

CONTENT:

Lesson Introduction

- _____ Aircraft Engines and Propellers
- _____ Fuel System
- _____ Oil System
- _____ Hydraulic Systems
- _____ Additional Flaps & Landing Gear Systems
- _____ Electrical Systems
- _____ Environmental Systems
- _____ Deicing and Anti-Icing Systems
- _____ Vacuum System
- _____ Additional Systems Unique to the Training Airplane

COMPLETION STANDARDS:

At the completion of this lesson, the student will demonstrate through oral discussion, knowledge and understanding of the training aircraft's equipment and systems.

REQUIRED STUDY:

FAA-H-8083-3-AFH
AFM/POH
SYWTFT - Chapters 6, 10, 12

Notes: _____ _____ _____ _____ _____
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LESSON 10
DUAL – AIRPLANE

DATE _____ ACFT ID _____ GRADE (Circle One) S U I
STUDENT NAME _____ STUDENT SIGNATURE _____
INSTRUCTOR # _____ INSTRUCTOR SIGNATURE _____
FLIGHT TIME: (1.5) _____ DISCUSSION: (0.3) _____
INSTRUMENT: (0.3) _____ TOTAL IN COURSE: (F/D) _____ / _____

LESSON OBJECTIVE:

During this lesson, the instructor will review procedures in the multiengine airplane as required.

CONTENT:

Lesson Review

- _____ Cockpit Management
- _____ Short-Field Takeoff and Climb
- _____ Aircraft Systems Operation
- _____ Engine Failure Procedures after Takeoff (Simulated)
- _____ Engine Failure Procedures on the Ground before V_{MC}
- _____ Maneuvering during Slow Flight
- _____ Power-Off Stalls
- _____ Power-On Stalls
- _____ Accelerated Stalls

Lesson Review

- _____ V_{MC} Demonstration
- _____ Steep Turns
- _____ Systems Malfunctions
- _____ Emergency Descent
- _____ Engine Failure Procedures during Cruise Flight – IR
- _____ IFR En Route Procedures – Simulated SE
- _____ Non-Precision Approaches – Simulated SE
- _____ Landing from an Instrument Approach – Simulated SE
- _____ Short-Field Approach and Landing

COMPLETION STANDARDS:

At the completion of this lesson, the student will demonstrate an understanding of the training aircraft's advanced equipment and systems and demonstrate maneuvers to the appropriate FAA Practical Test Standards.

REQUIRED STUDY:

- FAA-H-8083-3-AFH
- FAA-S-8081-14-PPTS or FAA-S-8081-12-CPTS
- AFM/POH
- SYWTFT - Review Chapters as Needed

<p>Notes:</p> <hr/> <hr/> <hr/> <hr/> <hr/>
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LESSON 11
DUAL – STAGE CHECK
AIRPLANE

DATE _____	ACFT ID _____	GRADE (Circle One) S U I	
STUDENT NAME _____		STUDENT SIGNATURE _____	
INSTRUCTOR # _____		INSTRUCTOR SIGNATURE _____	
FLIGHT TIME: (1.5) _____		DISCUSSION: (1.5) _____	
INSTRUMENT: (0.5) _____		TOTAL IN COURSE: (F/D) _____ / _____	

LESSON OBJECTIVE:

During this lesson, the student will review all multiengine maneuvers and procedures specified in the appropriate FAA Practical Test Standards.

CONTENT:

Lesson Review

Preflight Preparation

- _____ Performance and Limitations
- _____ Principles of Flight – Engine Inoperative
- _____ Operation of Systems

Preflight Procedures

- _____ Preflight Inspection
- _____ Cockpit Management
- _____ Engine Starting
- _____ Taxiing
- _____ Before Takeoff Check

Takeoffs, Landings And Go-Arounds

- _____ Normal and Crosswind Takeoffs and Climb
- _____ Normal and Crosswind Approach and Landing
- _____ Short-Field Takeoff and Climb
- _____ Short-Field Approach and Landing

Performance Maneuver

- _____ Steep Turns

Lesson Review

Slow Flight And Stalls

- _____ Maneuvering during Slow Flight
- _____ Power-Off Stalls
- _____ Power-On Stalls
- _____ Accelerated Stalls
- _____ Spin Awareness

Emergency Operations

- _____ Emergency Descent
- _____ Engine Failure Procedures on the Ground before V_{MC}
- _____ Engine Failure Procedures after Takeoff (Simulated)
- _____ Normal and/or Crosswind Approach and Landing – Simulated SE
- _____ Systems and Equipment Malfunctions
- _____ Emergency Equipment and Survival Gear

Multiengine Operations

- _____ Maneuvering with One Engine Inoperative
- _____ V_{MC} Demonstration
- _____ Engine Failure during Flight – IR & VR
- _____ Instrument Approach – Simulated SE – IR

COMPLETION STANDARDS:

This final check is complete when the student has demonstrated competence in all multiengine operations, including instrument approach procedures, and single-engine operations in accordance with the appropriate FAA Practical Test Standards.

REQUIRED STUDY:

- FAA-H-8083-3-AFH
- FAA-S-8081-14-PPTS or
- FAA-S-8081-12-CPTS
- AFM/POH
- SYWTFT - Review
- Chapters as Needed

Notes:
