



The Pilot's Manual

Airline Transport Pilot Certification Training Program Syllabus

Second Edition

A Ground & Flight Training Course for ATP Airplane
Multiengine Certification based on *The Pilot's Manual:
Airline Transport Pilot*



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About This Syllabus

Course Objective

The objective of this syllabus is for the student to acquire the necessary aeronautical knowledge, skill and experience to meet the training requirements of 14 CFR §61.156 for the Airline Transport Pilot (ATP) and/or ATP Restricted (ATP-R) certificate with airplane category multiengine class rating or an ATP certificate issued concurrently with an airplane type rating.

Prerequisites

The applicant must be able to read, speak, write and understand the English language, be of good moral character, and be at least 23 years of age for an Airline Transport Pilot Certificate, or 21 years of age for an ATP-Restricted Certificate. Applicants must meet at least one of the following requirements of 14 CFR §61.153(d):

1. Hold a Commercial Pilot Certificate with an Instrument Rating (most common);
2. Meet the military experience requirements under 14 CFR §61.73 to qualify for a Commercial Pilots License and Instrument rating;
3. Hold either a foreign airline transport pilot license with instrument privileges, or a foreign commercial pilot license with an instrument rating.

The applicant must also meet the aeronautical experience requirements as outlined below for the certificate they wish to obtain.

Aeronautical Experience Requirements Airline Transport Pilot Certificate	
Total Time	1,500 Hours
Cross-Country	500 Hours
Night Time	100 Hours
Airplane Class	50 Hours Minimum
Instrument	75 Hours
Pilot-in-Command	250 Hours

*The content in this chart is abbreviated; refer to 14 CFR §61.159 for complete requirements of aeronautical experience containing exceptions to the above listed hours and additional requirements for pilot-in-command time.

Aeronautical Experience Requirements Airline Transport Pilot—Restricted Certificate	
U.S. Military Pilot or former	750 Hours Total Time
Bachelor's Degree with Aviation Major	1,000 Hours Total Time
Associate's Degree with Aviation Major	1,250 Hours Total Time

*The content in this chart is abbreviated; refer to 14 CFR §61.160 for a complete description of aeronautical experience required for ATP Restricted certificate.

Airline Transport Pilot Certification Training Program

The Airline Transport Pilot Certification Training Program (ATP CTP) is made up of two parts, Academic Training and Flight Simulator Training Device (FSTD) training. The Academic Training portion consists of four stages, with a total of 19 modules requiring a minimum 31 hours of class work. The FSTD training consists of two stages with a total of six modules requiring a minimum of 10 hours of training in a FSTD. Up to four hours may be completed in a Flight Training Device (FTD) and the remainder must be completed in a Full Flight Simulator (FFS). FSTD ATP CTP topics are divided into two categories: (D) Demonstration-Based, or (E) Evaluation-Based and listed accordingly; many topics may fall into both categories. This training program is designed to impart conceptual knowledge through academics and consolidate that knowledge through training in an FSTD. This syllabus meets the requirements for either an ATP or ATP Restricted (ATP-R) certificate.

Included in this syllabus is Appendix 1: Upset Recovery Scenarios. These scenario examples are taken from AC 61-138 and can be easily tailored to any transport category airplane. The examples given are not intended to be limiting in any way—they are provided as a framework for developing a training curriculum.

Testing Procedures

At the end of each stage in the academic training portion of the syllabus, an exam will be given covering the previous modules. A final test is given at the end of the ATP CTP covering the course material in its entirety. Successful completion of the ATP CTP is dependent upon the student displaying an understanding of each academic area covered and passing each written test administered with a score of 70% or higher.

Eligibility

Before applying for an ATP or ATP-R, the applicant must meet all prerequisites and aeronautical experience for this course. In addition, applicants must receive a graduation certificate from an authorized training provider certifying completion of an airline transport pilot certification training program. Applicants must pass an FAA knowledge exam and practical test (checkride) that apply to the aircraft category and class rating sought. Your certificate of completion from this CTP must be obtained prior to taking your FAA knowledge test.

Required Materials for ATP CTP Syllabus (titles sold separately)

- *The Pilot's Manual: Airline Transport Pilot (ASA-PM-ATP)*
- *The Pilot's Manual: Airline Transport Pilot Reader Resources**

Recommended Reading for ATP CTP (titles sold separately)

- *Federal Aviation Regulations for Flight Crew (ASA-FAR-FC)*
- *Airline Transport Pilot Oral Exam Guide, Michael Hayes (ASA-OEG-ATP)*
- *Airline Transport Pilot Test Prep (ASA-TP-ATP)*
- *Airline Transport Pilot Practical Test Standards (ASA-8081-5)*

* The PM: ATP Reader Resources contain Advisory Circulars, FAA, NTSB, and additional resources pertinent to completing the ATP CTP Syllabus lessons. For your convenience you can find a dedicated reader resource page by following the below link:

<https://www.asa2fly.com/reader/pmatp>

Reader Resources

Federal Aviation Administration Advisory Circulars

[AC 61-138, Airline Transport Pilot Certification Training Program](#)
[AC 120-27, Aircraft Weight and Balance Control](#)
[AC 120-51, Crew Resource Management Training](#)
[AC 120-58, Pilot Guide: Large Aircraft Ground Deicing](#)
[AC 120-66, Aviation Safety Action Program \(ASAP\)](#)
[AC 120-74, Parts 91, 121, 125, and 135 Flightcrew Procedures During Taxi Operations](#)
[AC 120-82, Flight Operational Quality Assurance](#)
[AC 120-90, Line Operations Safety Audits](#)
[AC 120-91, Airport Obstacle Analysis](#)
[AC 120-92, Safety Management Systems for Aviation Service Providers](#)
[AC 120-100, Basics of Aviation Fatigue](#)
[AC 120-101, Part 121 Air Carrier Operational Control](#)
[AC 120-109, Stall Prevention and Recovery Training](#)
[AC 120-111, Upset Prevention and Recovery Training](#)

Additional Resources, Including Accidents Investigation Reports and Simulations

[Airplane Upset Recovery Training Aid Revision 2](#)
[ASRS Program Briefing](#)
[BEA Report of Air France 447](#)
[Dutch Safety Board Animation of Turkish 1951](#)
[FAA Runway Safety Resources](#)
[FAA Runway Safety Resources for Pilots](#)
[FAA Order 8900.1, Volume 4, Chapter 4, Configuration Deviation List and Minimum Equipment List](#)
[NTSB Animation of American Airlines 587](#)
[NTSB Animation of Colgan Air 3407](#)
[NTSB Report Number: AAR-10-01, Colgan Air 3407](#)
[NTSB Report of Midwest Airlines 490](#)

Additional ASA Resources

[FAR/AIM: Federal Aviation Regulations and Aeronautical Information Manual](#)
[FAR FC: Federal Aviation Regulations for Flight Crew](#)
[FAR/AIM: Federal Aviation Regulations and Aeronautical Information Manual](#)

ATP CTP Minimum Course Hours

For 14 CFR §61.156 Compliance

These course hours are for student/instructor guidance only. They are a suggested time schedule which will ensure minimum academic and FSTD training compliance with 14 CFR Part 61. Shaded portions should be filled in to log training time towards course minimums.

Page		Date	Classroom	FTD	FSS	Exam	Score
PART 1: Academic Training							
2	Stage 1						
3	Module 1		2.5				
4	Module 2		2.5				
5	Module 3		3.0				
34	Exam*					0.5	
6	Stage 2						
7	Module 1		1.25				
8	Module 2		0.75				
37	Exam*					0.5	
9	Stage 3						
10	Module 1		1.0				
11	Module 2		1.5				
12	Module 3		1.0				
13	Module 4		1.0				
14	Module 5		1.5				
15	Module 6		1.5				
16	Module 7		2.0				
17	Module 8		1.5				
18	Module 9		1.5				
19	Module 10		1.5				
40	Exam*					0.5	
20	Stage 4						
21	Module 1		2.0				
22	Module 2		2.0				
23	Module 3		2.0				
24	Module 4		1.0				
44	Exam*					0.5	
PART 2: FSTD Training							
26	Stage 1**						
27	Module 1			2.0			
28	Module 2			2.0			
29	Stage 2						
30	Module 1				1.5		
31	Module 2				1.5		
32	Module 3				1.5		
33	Module 4				1.5		
48	Final Exam*					1.0	
	TOTALS		31.0	4.0	6.0	3.0	

*A minimum score of 70% is required on all stage exams and final exam. Exams should be reconciled to 100%.

**Part 2, Stage 1 can be completed in an FTD, FFS or combination of both. A maximum of 4 hours FTD time can be counted towards ATP-CTP minimums.

Graduation Certificate

Training Provider

Name _____

Address _____

FAA Certificate Number _____

Applicant

Name _____

Address _____

FAA Certificate Number _____

The applicant named above has successfully completed the **Airline Transport Pilot Certification Training Program** as required by 14 CFR §61.156, and therefore has met the prerequisite required by 14 CFR §61.35(a)(2) for the FAA Airline Transport Pilot Airplane Knowledge Exam.

Instructor Signature

Certificate Number

Date

Part 1

Academic Training

Stage 1

Aerodynamics

(Minimum 8 hours)

Objective:

The objective of Stage 1 is for the pilot to demonstrate an understanding of the academic areas covered to include aerodynamics and high altitude operations.

Classroom Instruction:

Module 1: High Altitude Operations (2 hours 30 minutes)

Module 2: Stall Prevention and Recovery Training (2 hours 30 minutes)

Module 3: Upset Prevention and Recovery Training (3 hours)

Stage 1 Exam

Total Classroom Instruction Time: 8 Hours

Completion Standards:

Stage 1 is complete when the pilot achieves the objective of each module, and can demonstrate the knowledge of the academic training topics outlined. The pilot must score at least 70% on the Stage 1 Exam, and all deficient areas shall be reconciled to 100%.

Stage 1 / Module 1

High Altitude Operations

Academic Training/Classroom Instruction: 2 hours 30 minutes

Lesson Objective:

Students will have an understanding of aerodynamics, especially at altitudes near the maximum operating altitudes and at high operational weights. Students will also understand the narrow operating margins in these conditions and how to safely conduct flight operations in large transport category airplanes with varying operating conditions.

Assignment:

The Pilot's Manual: Airline Transport Pilot, Chapter 1

Content:

- Basic principles of energy management
 - Kinetic
 - Potential
- Relationship between airspeeds
 - Mach number
 - Indicated airspeed
 - True airspeed
 - Changeover altitudes
- Bank angles at high altitudes
 - Effect on high speed operating margins
 - Effect on low speed operating margins
- Relationship between altitude capability, weight, and temperature
- Convergence of V_{MO}/M_{MO} and stall angle of attack (AOA), including turbulence considerations
- High altitude/low energy recovery
- Speed reductions at high altitude
- Excursions behind the power curve at high altitudes and associated recovery techniques (high altitude slowdowns, emphasize no jeopardy events when needing to vacate altitudes for operational considerations)
- Maximum lift over drag ratio (L/D_{MAX})
 - Best range
 - Best endurance
- Flight characteristics of swept wing airplanes
 - Use of a yaw damper
 - Phenomena such as Dutch roll

Completion Standards:

The pilot will demonstrate an understanding of the academic areas covered in this module through an acceptable evaluation process as prescribed by the training provider.

Stage 1 Exam

Aerodynamics

1. Upon which factor does wing loading during a level coordinated turn in smooth air depend?
A—Rate of turn.
B—Angle of bank.
C—True airspeed.
2. As outside air pressure decreases, thrust output will
A—increase due to greater efficiency of jet aircraft in thin air.
B—remain the same since compression of inlet air will compensate for any decrease in air pressure.
C—decrease due to higher density altitude.
3. Free directional oscillation (dutch roll) is
A—the result of three oscillations, pitch, roll, and yaw, about the respective axis.
B—a coupled lateral/directional oscillation that is usually dynamically stable.
C—a coupled lateral/vertical oscillation that is usually dynamically unstable.
4. What is the condition that may occur when gusts cause a sweptwing-type airplane to roll in one direction while yawing in the other?
A—Mach buffet.
B—Wingover.
C—Dutch roll.
5. If tailplane icing or a tailplane stall is detected, the pilot should
A—lower the flaps to decrease airspeed.
B—decrease power to V_{FE} .
C—retract flaps and increase power.
6. During icing conditions, a tailplane stall may
A—begin as the flaps are retracted.
B—occur at a relatively high airspeed.
C—slowly become evident as the nose pitches upward.
7. For a given angle of bank, the load factor imposed on both the aircraft and pilot in a coordinated constant-altitude turn
A—is directly related to the airplane's gross weight.
B—varies with the rate of turn.
C—is constant.
8. By changing the angle of attack of a wing, the pilot can control the airplane's
A—lift, gross weight, and drag.
B—lift, airspeed, and drag.
C—lift and airspeed, but not drag.