

SkyHoppers Aerial Adventures

800-515-4225

Commercial Pilot Syllabus

Commercial Pilot Candidate:

**Written Exam Endorsement
& Test Dates,
and Score:**

**Practical Exam Endorsement
& Test Dates,
and Result:**

Aeronautical Experience Requirements

(All as per 14CFR61.129a)

- 250 hours total flight time, including:**
- 100 hours in powered aircraft (as per 61.129a1)
- 100 hours P-I-C time, including:**
- 50 hours in airplanes (as per 61.129a2i)
- 50 hours cross country with 10 hours in airplanes (as per 61.129a2ii)
- 20 hours Dual training in FAR 61.127b1 Operations, including:**
- 10 hours Dual Instrument with 5 hours in airplanes (as per 61.129a3i)
- 10 hours Dual in Complex Airplane (as per 61.129a3ii)
- 2 hours Dual Day VFR X-C 100nm Outbound (as per 61.129a3iii)
- 2 hours Dual Night VFR X-C 100nm Outbound (as per 61.129a3iv)
- 3 hours Dual within 60 days preceding practical test (as per 61.129a3v)
- 10 hours SOLO flight in FAR 61.127b1 Operations, including:**
- Single Solo cross-country of at least 300nm total distance (including one 250nm leg) and having 3 landings (2 interim & 1 destination) (as per 61.129a4i)
- 5 hours Solo night VFR (as per 61.129a4ii)
- Ten Solo night TOL's at airport at Towered Airport (as per 61.129a4ii)

Commercial Ground Instruction

(All as per 14CFR 61.125b 1-15)

Jeppesen
Chapter

✈️ Advanced Aircraft Systems

High Performance Powerplants (as per 61.125b12 & 13) **11A**
(Discuss elements of fuel injection, turbocharging, and constant speed propeller systems & operations; engine monitoring; abnormal combustion)

Environmental & Ice control systems (as per 61.125b12 & 13) **11B**

Complex Aircraft (as per 61.125b12 & 13) **11C**
(Discuss elements of hydraulic systems, position indicators, warning horns, safety switches, airspeed limitations, operation, malfunction, & manual extension of landing gear systems)

✈️ Advanced Aeronautical Concepts

Advanced Aerodynamics (as per 61.125b3) **12A**

Advanced Performance Limitations (as per 61.125b7 & 8) **12B**
(Discuss the effects of exceeding aircraft limitations)

Advanced Weight & Balance Limitations (as per 61.125b6) **12C**

Review of Fundamental Navigation (as per 61.125b9) **2-12 to 2-15**
(Review of navigation using magnetic compass, pilotage & dead reckoning)

Advanced Radio Navigation (as per 61.125b10) **2C**

✈️ Commercial Flight Considerations

Regulations Applicable to Commercial Pilots (as per 61.125b1)
(Review of privileges and limitations in Jeppesen Chapter 1A, 14CFR61.133, & Advisory Circular 120-12A)

Accident & Incident Reporting (as per 61.125b2) **NTSB 830**

Airspace Procedures (as per 61.125b15) **3B**

Advanced Meteorological Interpretation (as per 61.125b4) **9B to 9E**
(Discuss elements of critical weather, windshear recognition & avoidance, and weather reports & forecasts)

Aeronautical Decision Making (as per 61.125b5 & 11) **13B**
(Discuss safe & efficient operation of aircraft, including recognition of risk factors, behavioural traps, risk manage elements, & use of the decision making process)

✈️ Commercial Operations

Commercial Flight Maneuvers (as per 61.127b1iv, v, & vi) **14A to 14E**

Emergency Procedures (as per 61.125b13 & 61.127b1ix) **13A**

Night and High-Altitude Operations (as per 61.125b14) **11B**

FAA Commercial Pilot Written Exam

Stage 1 - Commercial Considerations

✈️ Preflight Preparation (as per 61.127b1i)

Certificates and Documents
(Exhibit knowledge of commercial certificate privileges & limitations, medical requirements & special flight permits)

Airworthiness Requirements
(Exhibit knowledge of aircraft inspections, inoperative equipment, minimum equipment, and special flight permits)

Weather Information
(Exhibit knowledge of weather report analysis in making go/no-go decision)

Cross-country Flight Planning
(Private knowledge revisited; Exhibit knowledge of power and mixture management for range and performance)

National Airspace System (Private knowledge revisited)

Aircraft performance & limitations
(Exhibit knowledge of advanced performance specifications, weight and balance assessment, and density altitude effects & operations)

Operation of systems
(Exhibit knowledge of high performance powerplants & constant-speed propeller, retractable landing gear & hydraulics, oxygen systems, and de-icing equipment)

Aeromedical Factors
(Exhibit knowledge of commercial flight fitness limitations & passenger considerations)

✈️ Preflight & Postflight Procedures (as per 61.127b1ii & xi)

Emphasis & practice in flowcheck - checklist methods

Preflight Inspection
(Exhibit knowledge of electrical equipment for day & night operations, and aircraft maintenance requirements)

Cockpit Management
(Demonstrate pre/post-flight & emergency passenger briefing, professional organization of pilot materials, and crew resource management skills)

Engine Starting
(Exhibit knowledge of propwash courtesy, external power source usage, high altitude mixture leaning, and effective engine starting)

Taxiing
(Demonstrate runway incursion avoidance techniques while performing instrument checks)

Before Takeoff Check (Demonstrate proper aircraft positioning & sequencing)

Postflight Parking, Securing, & Checklist Procedures

✈️ Airport Operations - Private Knowledge Revisited (as per 61.127b1iii)

Airport Markings, Signage, & Lighting

Traffic Pattern Procedures & Collision Avoidance

Airport Radio Communications & ATC Light Signals

✈️ High Altitude Operations (as per 61.127b1x)

Supplemental Oxygen

Pressurization Systems

Stage 2 - Commercial Maneuvers

✈️ Slow Flight & Stalls (all as per 61.127b1viii)

Slow Flight Configuration (PTS for airspeed ± 5 knots & altitude ± 50 feet)

Power-Off Stalls (Private standards revisited)

Power-On Stalls (Private standards revisited)

Turning Stalls (Private standards revisited)

Spin Awareness (Recognize incipient spin attitude, and execute recovery)

✈️ Takeoff & Landing (as per 61.127b1iv)

Normal Takeoff & Climb (PTS = Vy ± 5 knots)

Normal Approach-to-Land (PTS = 1.3Vso ± 5 knots & touchdown within 200 feet)

Crosswind Takeoff & Climb (PTS = Vy ± 5 knots)

Crosswind Approach-to-Land (PTS = 1.3Vso ± 5 knots & touchdown within 200')

Short Field Takeoff & Climb (PTS = Vx + 5/-0 knots, then accelerate to Vy ± 5 knots)

Short Field Approach-to-Land (PTS = 1.3Vso ± 5 knots & touchdown within 100')

Soft Field Takeoff & Climb (PTS = Vy ± 5 knots)

Soft Field Approach-to-Land (PTS = 1.3Vso ± 5 knots)

180 Degree Power-off Accuracy Approach-to-Land

Go-Around Procedure (PTS = Vy ± 5 knots)

✈️ Emergency Operations (as per 61.127b1ix)

Checklist Procedures for Systems & Equipment Malfunctions

Simulated Engine Failure & Descent to Forced Landing
(Demonstrate response to different types of emergencies & configures complex airplane accordingly for appropriate descent maneuver while maintaining positive load factor)

Emergency Equipment & Survival Gear

✈️ Performance Maneuvers (as per 61.127b1v & vi)

Steep turns (Commercial PTS = bank to 50° ± 5°)

Steep spirals

Chandelles

Lazy eights

Eights-on-pylons (as per 61.127b1vi)

✈️ Advanced Navigation (as per 61.127b1vii)

Pilotage and Dead Reckoning
(Navigate to planned checkpoint and verifies position within 2nm & arrives within 3 minutes of ETA; maintains appropriate altitude ± 100 feet and headings ± 10°)

Navigation systems and ATC Radar services
(PTS = altitude ± 100 feet and headings ± 10°)

Diversions (PTS = altitude ± 100 feet and headings ± 10°)

Lost procedures (Private standards revisited)