

## PRIVATE-SPORT-COMMERCIAL PILOT GROUND SCHOOL SYLLABUS

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### Objectives:

- Preparation of students for taking the FAA Private or Sport Pilot Aeronautical Knowledge Written Examination.
- Reinforce good aeronautical decision making in every aspect of flight and ground operations.
- Provide interactive in-class presentations over a broad scope of aviation fundamentals.
- Supplement presentations with real life examples and professional videos.
- Insure working skills by employing “proficiency based” evaluation for each segment of training.
- Provide continuous updated materials utilizing website at [www.groundschoo.weebly.com](http://www.groundschoo.weebly.com)

### Method of Instruction:

- Classroom Lecture, Discovery Learning, Website exercises and supplemental learning using video DVDs by King Schools, and Jeppesen (a Boeing Company)

**Length of Course:** This class can be presented in 4 formats

- **Extreme:** 5 days (Monday-Friday), 8 hours of class daily, 4-6 hours of self-study nightly, with the final examination on the Saturday following the final Friday class. This is an extremely demanding and difficult schedule but can be provided if needed.
- **Intensive:** 2 Week, 5 days a week (Monday-Friday), 4 hours in class, 4 hours self-study daily. Ending on the 10<sup>th</sup> session with final exam and endorsements as earned.
- **Weekend Intensive:** 3 Weekends, 8 hours a day, 16 hours of self-study during each week between sessions. Final after the last session on the final Sunday.
- **Saturday Only:** 9 Saturday sessions of 4 hours each and 4 hours of self-study during the week.

**Training Materials:** \* Copies provided on Student CD-ROM

- Pilots Handbook of Aeronautical Knowledge\*
- Aeronautical Information Manual \*
- Aircraft Weight and Balance Handbook \*
- Airplane Flying Handbook \*
- Aeronautical Information Manual \*
- Federal Aviation Regulations \*
- Weight Shift Control Aircraft Flying Handbook \*
- Introduction To Gyroplanes Handbook \*

Supplied by Students

- Current Miami Sectional Chart
- Current Airport/Facilities Directory
- Current FAR/AIM
- E6B Flight Computer and Plotter
- Gleim Aviation: Private Pilot FAA Knowledge Test

Recommended Materials but not required

- Jeppesen Private Pilot Manual
- ASA: Private Oral Exam Guide

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Materials student costs are approximately \$ 73 (Sport Pilot) and \$157 (Private Pilot) based on Sportys' Pilot Shop. Priced on 07/11/2010, shipping not included.

**Method of Assessment:** "Proficiency based training" to include demonstration of all skills. Test-retest provided and students are required to pass session multiple-choice and oral examination with a minimum performance on examinations of 80% by method of test-retest. Demonstration of skills in dead reckoning, E6B computation, and navigation logs will be confirmed by inspection during class. The final examination will be same format as actual the FAA Aeronautical Examination to be taken by each student.

**Instructor: Steve Reisser**

Education: BA-Psychology, Hastings College 1970, MA-Behavior Modification, 1973 SIU

Professional: Psychologist, College Instructor. Programmer, Systems Analyst, Senior Systems Analyst, IT Consultant, IT Director, and Network Administrator.

Aviation: Private Pilot 1968, #1949122, Basic Ground Instructor, and Advanced Ground Instructor since 2003. Consultant, FAR Part 135 On Demand Airlines for Transworld Express, LLC.

## **SECTION SYLLABUS**

### **SECTION 1: AIRCRAFT**

Notation of “panels” (#) below indicates individual frames with materials presented in PowerPoint to the class.

#### **HOUR 1**

Be SMART acronym for achievable aviation goals(2)

Certificates, Categories, and Ratings (3)

Aeronautical Decision Making (17)

Risk/Workload Management (10 panels)

Aviation Physiology

Disorientation (6), Air Sickness(1), Ear Blockage(1), oxygen requirements, hypoxia and hyperventilation(10), alcohol and drug impairment(3), vision(5), scuba diving and risks in aviation(1), and IMSAFE(1).

Break

#### **HOURS 2 AND 3**

##### Aircraft Systems

Parts of the aircraft(2), control surfaces(2), landing gear configurations(1), powerplants(2), induction system(12), fuel system(5), oil system(2), exhaust system(1), propellers(2), Electrical System(2).

Break

##### Aircraft Instruments

Instrument Panel-What is a six-pack (1)

Pitot Static System and Instruments

Barometric pressure/lapse rates (1)

Pitot-static structure (2) and blockages (2)

Airspeed indicator, mechanics, markings, V-speeds, aerodynamics of  $V_A$ , types of airspeed, airspeed errors (7).

Altimeter, types of altitude, mechanics, limitations and effects of pressure and temperature in indicated altitude (9)

Vertical Speed Indicator and mechanics (1)

##### Gyroscopic Instruments

Typical panel configuration (1) and principles of operation (1), and failures (1)

Turn Coordinator-mechanics (1), Turns, slips and slides (3), degrees bank at standard rate (1)

Attitude indicator, mechanical operations and operational limitations (3)

Comparison of gyroscopic and non-gyroscopic directional operation (2)

Magnetic Compass, mechanics, magnetic variation and turning errors (4)

Primary instruments for different flight configurations (3)

Overview of Digital Instrumentation Systems including EFIS-MDF, EMS, SV, ESV, GPS, and ADS-B (20)

Required instrumentation for day and night VFR(2)

Break

## HOUR 4

### Aerodynamics

#### Lift

Four forces of Flight(2)

Principles(2), mechanics, angle of attack, and other factors(3), flaps(1)

#### Drag

Parasite vs. induced drag(1)

Byproducts-Wake Turbulence and avoidance(2)

Total drag components, and  $L/D_{Max}$ (3)

#### Ground Effect(1)

Stability [static, dynamic, stability control, longitudinal, lateral, vertical and interactions(9)

Stalls and critical angle of attack(2) and Spins(1)

Aerodynamics of climbing flight(3), descending flight(3), and turns(4)

Aerodynamics of Load (3)

Commercial Aeronautical Knowledge Supplement (1)

Optional as needed: Supplemental Video – Jeppesen on Aerodynamics (15 minutes)

## LUNCH BREAK and STUDY

## **SECTION 2: AVIATION WEATHER**

## HOUR 5

### **Examination on Section 1 (30 minutes)**

FAA Requirements for Private-Sport Pilot regarding Meteorology(1)

Understanding time zones, military format and Zulu time(1)

#### Basic Weather Theory

Atmospheric Pressure, standard pressure and lapse rate(1)

Density Altitude and effects of pressure, temperature and humidity(1)

Highs, Ridges, Lows, Troughs, Cols, and Isobars(2)

Coriolis Effect and frictional effects (2)

Convection, the planetary boundary layer and turbulences at inversions(2)

Global and local wind forces(3)

Mountain, Sea/Land Breezes (3)

Stability, adiabatic heating/cooling, and inversions, and characteristics(3)

Moisture, conversion processes, humidity, dewpoint (1)

Cloud classifications, low [fog, stratoform, cumuloform], middle, and high level clouds(8)

Mechanics and types of precipitation (2)

#### Break

## HOUR 6

### Air Masses

Air mass origins, classifications, and modifications (2)

Fronts

- Definitions(1)
- Characteristics of cold fronts fast and slow moving and related wind/clouds and precipitation(1)
- Characteristics of warm fronts, wind/clouds and precipitation(1)
- Characteristics of stationary fronts, warm and cold front occlusions(1)
- Station timeline analysis of cold front(1)

Thunderstorms

- Types: Air mass, single-multi-super cell thunderstorms(1)
- Life-cycle, temperatures, and altitude analysis.(1)
- Air mass verses steady state thunderstorms (1)
- Pictorial representations and hazards (1)
- Avoidance (1)

Lightning: Global frequency, names of types, low-mid-high atmospheric lightning(5)

Weather hazards and turbulence

- Low level mechanical effects (1)
- Convective effects (1)
- Turbulences level classifications and wind shear (2)
- Wake turbulence, jet blast, and clear air turbulence (3)
- Lenticular and rotor cloud turbulence (1)
- Icing: types, mechanics, and environments of formation (2)
- Restrictive visibility due to HZ, FU, DU and VA (1)

Break

**HOOR 7**

Printed Reports and Forecasts

- Sources of weather reports and forecasts(1)
- Aviation Routine Information Reports-METAR: Components, translation, and practice exercises (9)
- Radar Weather Reports-SD (1)
- Pilot Reports-PIREP: components, definitions, reporting requirements and translations(4)
- Terminal Aerodrome Forecasts: components and samples (3)
- Area Forecasts-FA: Synopses, effective times, outlooks and practice (4)
- Winds Aloft and Temperatures Aloft-FD: Planning and use of FD, and practice (2)
- Severe Weather Forecasts: HW, AC, WW, WA-Sierra, Tango, Zulu, WS, and WST.
- Standard Briefings: Practice(1)

Break

**HOOR 8**

Graphic Weather Products

- Winds Aloft and comparison to printed reports (1)
- Surface Analysis Chart components and sample (3)
- Weather Depiction Chart for VFR, MVFR and IFF determination (1)
- Radar Summary Charts-elements and sample (2)
- Low Level Significant Weather Prognostic Chart (4)
- 2 Day Convective Outlook (1)

Forecast Winds/Temperature Aloft (1)  
Volcano Ash Graphics (1)  
Frequency of Weather Reporting (1)  
Electronic Flight Displays and Multi-Function Displays of Weather Data (3)

Sources of Weather

Automated Flight Service Station Briefings (1)  
Comparison and use of Standard, Abbreviated, and Outlook Briefings (4)  
In-flight Weather Services:  
Usage(1), Navigation frequencies, RCO (1), DUATS (1)  
Flight Planning tools that incorporate weather services (1)  
FSS, EFAS, TWEB, CWA, and HWAS (1)  
AWOS, and ASOS(1)

Flight Service Stations Weather Briefings: Outlook, Standard and Update.

Break

**SECTION 3: THE FLIGHT ENVIRONMENT**

**HOUR 9**

**Examination on Section 2 – 30 minutes**

Safety of Flight

Airborne Collision Avoidance (2)  
Bird strikes and patterns (1)  
Empty Field Myopia and visual safety (1)  
Blind Spots on Aircraft (1)  
Safety practicing in training areas (1)  
Right of Way: Category, overtaking, head on, and converging traffic (2)  
Minimum altitudes over congested, uncongested, sparsely populated areas and hazardous terrains (1)  
Taxiing and flight controls (1)  
Passing of flight controls (1)

The Airport Environment

Uncontrolled Airports

Comparison of Controlled and Uncontrolled airports (1)  
Runway determination by CTAF, UNICOM or visual use of Windsocks, Wind Tees, and  
Tetrahedrons (1)  
The Traffic Pattern – Standard and Non-Standard (1)  
The Segmented Circle (1)  
Announcements in the pattern (1)  
Airport Beacon Types (1)  
Pilot Controlled Lighting and Operations (1)

Controlled Airports

Typical communications sources of ATC, Light Gun, Sectional decoding of Airport elements (1)

Runway Markings

Visual, non-precision and precision runways (1)

Threshold strips as width indicator (1)

Displacement thresholds and Blast Pad/Stopways (1)

Closed Runways (1)

Hold lines for VFR and IFR operations (1)

Parking Ramp hand signals (1)

Airport Sign Systems (1)

Runway Incursion: Avoidance, LAHSO, Runway Safety (3)

Visual Glideslope Indicators

VASI-multiple and single light systems (1)

Approach Lighting Systems including ALSF, REIL, MALSF and ODALS(1)

Overview graphic of full airport lighting systems (1)

Break

Hour 10

Charts

Definition of scale and type of charts: Sectional, WAC, TAC, and Low Enroute Chart (1)

Understanding Latitude and Longitude on aeronautical charts (1)

Sectional Charts

Special Use Airspace, Highest Terrain, and Minimum Elevation Figure (1)

Expiration date (1)

Legion for Airports, Airport Data and Additional Airport Information (1)

Identification of Airport Types and Services on Sectionals (1)

Identification of frequencies, data and surveillance radar (1)

Identification of TWEBS, HIWAS, Radio Navigation symbols, and contact methods for FSS (1)

Topography symbols (1)

Towers and Caution Areas (1)

Miscellaneous areas of Ultralight, Hang Gliding, Glider and Parachute Operations (1)

Terminal Area Chart and expiration date (3)

Break

Hour 11

View: KING VIDEOS #1: Sectional Charts

Practice use of Sectional charts

Break

Hour 12

Airspace

Overview of Controlled Airspace and graphic memory mnemonic (2)

Uncontrolled Airspace-G

Visual minimums, VFR minimum distance from clouds, minimum visibility, minimum pilot qualifications, VFR entry requirements, ATC Services and 3-D airspace profile (2)  
Altitude Reporting and transponder use of Mode C (1)

Controlled Airspace

Airspace-E

Visual minimums, VFR minimum distance from clouds, minimum visibility, minimum pilot qualifications, VFR entry requirements, ATC Services and 3-D airspace profile (1)

Airspace-D

Visual minimums, VFR minimum distance from clouds, minimum visibility, minimum pilot qualifications, VFR entry requirements, ATC Services and 3-D airspace profile (1)

Airspace-C

Visual minimums, VFR minimum distance from clouds, minimum visibility, minimum pilot qualifications, VFR entry requirements, ATC Services and 3-D airspace profile (1)

Airspace-B

Visual minimums, VFR minimum distance from clouds, minimum visibility, minimum pilot qualifications, VFR entry requirements, ATC Services and 3-D airspace profile (1)

Airspace-A

Visual minimums, VFR minimum distance from clouds, minimum visibility, minimum pilot qualifications, VFR entry requirements, ATC Services and 3-D airspace profile (1)

Terminal Radar Service Areas (1)

Speed Limits and Special VFR (1)

Overview and Identification Practice (2)

Special Use Airspace: Alert, MOAs, Warning, Restricted, Prohibited, NSA, SFZ, LLA, MTR, TFR, jump sites, continental and land based ADIZ, FRZ or SFRA, laser warnings, intercept procedures and expected pilot responses (18)

Break

**SECTION 4: USING THE E6B FLIGHT COMPUTER AND PLOTTER**

**HOUR 13-16**

**Examination on Section 3 – 30 minutes**

Note: Breaks provided between 50-60 minutes of each hour's class during this section.

Overview of E6B and Plotter (2)

Calculating Speed, Time, Distance, Fuel, Altitude

Formulas(1)

Calculating Distance and exercises (9)

Calculating Speed and exercises (9)

Speeds for less than 10 minutes (1)

Mental math for calculating Speed (1)

Time calculations (9)

Fuel calculations (8)

Calibrated verses True Airspeed, Calculating True Airspeed and Density Altitude (6)

Calculating True Altitude (3)

- Cruising altitudes, the use of winds aloft and interpolation (1)
- Multi-part Computations (1)
- Using the Wind Side of the E6B
  - Components of wind side E6B (1)
  - Wind Triangle (1)
  - Steps to determine wind correction angle and ground speed (1)
  - WCA-GS practice (5)
  - Determining Wind Direction and Speed while airborne using the E6B (1)
  - Deviation (1)
  - Components of the Navigation Log (Wind direction/speed, temperature at altitude to get TAS, WCA, WCA, GS, TH, MH and CH. and class problems (3)
- The Navigation Plotter
  - Marking True Course, distances, and checkpoints and 2 in-class exercises (3)

## **SECTION 5: CROSS COUNTRY PREPARATIONS AND COMMUNICATIONS**

### **HOURS 17-19**

#### **Examination on Section 4 – 30 minutes**

Note: Breaks provided between 50-60 minutes of each hour's class during this section.

#### Preparations Phase: Cross Country (X/C) Planning (1)

- Laying TC line, measuring distances, and identifying checkpoints. (2)
- Determination of TC using both longitude and latitude lines (1)
- Preparing the Navigation Log, steps and order of recording (1)
- Student Exercise: SRQ-CHN, CHN-VNC, VNC-SRQ (3)

#### Calculation Phase

- Determination of TAS from wind/temperature data (1)
- Determination of WCA and GS (1)
- Formatting X/C data on the Navigation Log (1)
- Recording TH, MH, CH, then calculating and recording time and fuel on the NavLog (4)
- Simplified Overview (1)

Beyond "Gross" calculation: Precision to account for taxi, climb, cruise, descent and landing (4)

As time permits, either in-class or homework assignment of precision navigation log preparation for flight from KTPA to KSEF.

### **HOUR 20**

#### Communications

- Flight Information and Radar Services (2)
- Transponder and Squawk Codes (1)
- Automated Terminal Information System & example (1)
- Flight Service Station flight information and services (2)
- Very High Frequency distance limitations (1)
- Communications Format and Tips for communicating with a Busy Tower (2)
- The "VFR Communications Kit" (1)

Uncontrolled Tower Communications (CTAF, Multicom, Unicom, GCO (2)

VFR Communications Video – 30 minutes

Controlled Airport Communications (1)

Departure / Arrival communication sequence (1)

Lost Communications Procedures (1)

Emergency procedures-PAN and MAYDAY (2)

Helpful communications hints (2)

The Phonetic Alphabet (1)

Sources of information on Communications (1)

## **SECTION 6: RADIO & ADVANCED NAVIGATION**

### **HOUR 21**

#### **Examination on Section 5**

Radio Navigation

Dead Reckoning and effects of wind (2)

Very High Frequency Omnidirectional Range

Line of Sight and Types of VORs (1)

Compass Rose and Victor Airways (1)

The VOR Indicator (1)

Identifying The Station (1)

Interpreting VOR indications (2)

Determining Course From and To Station (2)

Zones of “Ambiguity” and “Confusion” (1)

How wind affects track (1)

Changing radials and interception process (1)

Using radials as checkpoints (1)

Using radials to locate position (1)

Identifying radial intersections on Sectional and Low Enroute charts (1)

Use of Low Enroute Charts for VOR navigation (1)

Reverse sensing (1)

Position identification (6)

VOR Time and Distance Determination (4)

VOT (1)

Horizontal Situation Indicator (2)

Break

### **HOUR 22**

Automatic Direction Finding [Decommissioning]

Non-direction beacon and type of Compass Cards (1)

Relative Bearing and navigation to station (3)

Time and Distance to station using ADF (3)

Intercepting an ADF Bearing (1)

Sample questions regarding ADF (3)

ADF Errors (2)  
Radio Magnetic Indicator for both (1)

Loran C [Decommissioned] (1)  
Distance Measuring Equipment-DME (1)  
Inertial Navigation System (1)  
GPS (3)  
Break

## HOUR 23

Automatic Dependent Surveillance Broadcast (ADS-B)  
Definition and deliver into National Airspace System (1)  
In and Out Service Definition (2)  
Airspace usage (1)  
Equipment choices (1)  
Performance Based Navigation (1)  
    Required Performance Navigation (1)  
    RNAV usage with RPN (1)  
Optimized Profile Descent (1)  
PNP Arrival Procedures (1)  
Use with Phases of Flight (1)  
Emerging Technologies of SWIM, DC, and NNEW (1)  
    SWIM (1)  
    Data Comm (1)  
    NextGen Network Enabled Weather (1)  
National Airspace System Voice Switch and PBN (1)  
NextGen Flight Planning (1)  
    Push Back, Taxi and Departure (1)  
    Climb and Cruise (1)  
    Descent and Approach (1)  
    Landing, Taxi and Gate Arrival (1)

Break

## HOUR 24

**Examination on Section 6 – 30 minutes**

### **SECTION 7: AIRCRAFT PERFORMANCE**

#### Aircraft Performance

Contents of most Pilot's Operating Handbook (1)  
Factors Influencing Performance  
    Pressure Altitude (2)  
    Density Altitude and Charts (3)  
    Cross Wind and Headwind Components (5)

Takeoff Distance Graph (1)  
Runway Surfaces and Gradients and impact on takeoff distances (1)  
Hydroplaning effects on Takeoff Distance, braking and side loads (1)  
Takeoff Distance Exercises (4)  
Landing Distance Chart (2)  
Koch Chart and impact on climb (1)  
Determining IAS with different configurations and attitudes (1)  
Break

## HOUR 25

Climb V speeds (1)  
Absolute and Service Ceilings and chart (1)  
“Specific Range” instead of Miles per Gallon (1)  
Climb Charts (1)  
Rate of Climb (1)  
Fuel, Time and Distance to Climb (1)  
Cruise Performance Power/Airspeed Relationship (1)  
Cruise Power Settings (1)  
Range/Endurance at Cruise (2)  
RPM determination Chart (1)  
Cruise and Range Performance Tables (1)  
Break

## HOUR 26

### Weight And Balance

Importance (1)  
Definitions (1)  
Weight related problem (1)  
Effects of flight over Gross Weight (1)  
Definition of CG (1)  
Graphic forward / aft CG effects (1)  
Weight Categories (1)  
Reference Datum (1)  
Balance (1)  
Balance Problems (2)  
Break

## HOUR 27

Weight Shift (1)  
Plotting Moment/Wt and Moment/1000 (2)  
W&B Table Method (2)  
Determination of Load (1)  
Gross Weight Moment Limits and problem (2)

Graph Method (2)  
Shift of CG on fuel depletion (1)  
Additive Load factor on bank (1)  
Additional Weight Shift (2)  
Commercial Weight Shift (3)  
Break

**SECTION DAY 8: FARS : FEDERAL AVIATION REGULATIONS AND OTHER SOURCES OF AERONAUTICAL INFORMATION**

**HOUR 28**

**Examination on Section 7 – 60 minutes.**

**HOUR 29**

Required knowledge of FARs for Private (3)  
FAR 1.1 General Definitions, FAR 21.171, 23.3.1 and Part 39.1 (2)  
FAR 1.2 Abbreviations and Symbols (4)  
FAR 39.3, 43.3, 43.7, AND 43.9 (1) AD, Maintenance and records  
FAR Part 61.3 (requirements) and 61.15 Alcohol/Drugs (1)  
FAR 61.23 Medical Certificates and 61.56 Flight Reviews (1)  
FAR 61.31, .51 On Ratings, additional training and authorizations, 61.51 Logs, 61.55 2<sup>nd</sup> in command (2)  
FAR 61.60 Changes of Address, 61.113 Private Pilot Privileges and Limitations (1)  
FAR 61.315 Sport Pilot Privileges and Limitations (1.25)  
FAR 61.133 Commercial Pilot Privileges and Limitations and Part 71.75 Extent of Federal Airways (1)  
Part 91 General Operating and Flight Rules  
91.3 Responsibilities, 91.7 Civil aircraft airworthiness (1)  
91.11 Prohibition of Interference with crewmembers, 91.13 Careless or reckless Ops, 91.15 Dropping Objects, 91.17 Alcohol or Drugs (1)  
91.19 Carriage of drugs, 91.21 Portable electronic devices (1)  
91.103 Preflight, 91.105 Flight crewmembers at stations (1)  
91.107 Seat belts, shoulder harnesses and child restraint (1)  
91.111 Operating near other aircraft, 91.113 Right of Way (1)  
91.115 Right of water – Water operations, 91.117 Aircraft Speed (1)  
91.119 Minimum Speed, 91.121 Altimeter Setting (1)  
91.123 Compliance with ATC clearances and instructions (1)  
91.125 ATC Light Signals (1)  
91.126 Class G Airspace (1)  
91.127 Class E Airspace (1)  
91.129 Class D Airspace (2)  
91.130 Class C Airspace (1)  
91.131 Class B Airspace (1)  
91.135 Class A Airspace (1)  
Break

**HOUR 30**

## PRIVATE-SPORT-COMMERCIAL PILOT GROUND SCHOOL SYLLABUS

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91.141 Restrictions on proximity to the President and other parties, 91.143 proximity of space flight operations and 91.144 temporary restrictions during abnormally high barometric pressure (1)  
91.146 Passenger-carrying flights for benefit off a charity, nonprofit or community event (1)  
91.151 Fuel requirements for VFR, 91.153 VFR flight plan information (1)  
91.155 Basic VFR Whether Minimums (2)  
91.157 Special VFR Minimums, 91.159 VFR cruising altitudes or flight level (1)  
91.203 Civil Aircraft Certifications, 91.209 Aircraft Lights (1)  
91.207 Emergency Locator Transmitters (1)  
91.211 Supplemental oxygen, 91.303 Aerobatic Flight (1)  
91.307 Parachutes and parachuting (1)  
91.313 Restricted category civil aircraft: Operating limitations (1)  
91.318 Aircraft having experimental certificates: Operating limitations (1)  
Subpart E Maintenance, Preventive Maintenance, and Alterations, 91.403, 91.405, 91.409 and 91.417 (2)  
NTSB Parts 830.5, 830.10 and 830.15 (1)  
Commercial Part 91 FARS  
91.167 Fuel Requirements for IFR, 91.169 IFR Flight Plan, 91.171 VOR Equipment Check (1)  
91.175 Takeoff/Landing IFR, 91.177 Minimum Altitudes IFR, 91.183 IFR Radio Communications (1)  
91.187 IFR Controlled Airspace Malfunction Reports, 91.205 Instrument Equipment Requirements, 91.207 ELTs, 91.209 Aircraft Lights (1)  
81,211 Supplemental Oxygen, 91.215 ATC Transponder and Altitude Reporting Equipment/Use, 91.303 Aerobatic Flight, 91.331 Towing (1)  
91.313 Restricted Category Civil Aircraft Limitations, 91.315 Limited Category limitations, 91.319 Experimental Certificates operating limitations, 91.325 Primary Category Aircraft Limitations, 91.403 General (1)  
91.405 Maintenance Requirements, 91.407 Operating after Maintenance, Preventive, Rebuilding or Alteration, 91.409 Inspections, 91.413 ATC Transponder Tests and Inspections (1)  
91,417 Maintenance Records, 91.421 Rebuilt Engine Maintenance Records, and FAR 119.1 (1)

### HOUR 31

#### SOURCES OF PILOT INFORMATION

Major Sources including AIM, AF/D, Handbook of Aeronautical Knowledge, AOPA, Weather Flying, FARS (2)  
AIM Sections (3)  
Handbook of Aeronautical Knowledge Samples (3)  
AFD Table and Legend (12)  
AFD Samples (5)  
Internet Sources (8)  
Break

### **SECTION 9: FINAL EXAMINATION, ENDORSEMENT, GRADUATION**

#### HOUR 32

Examination Section 8 – 60 minutes

### **HOOR 33**

Last Pilot Standing Exercise – 60 Minutes

Homework: Students will prepare by highlight all possible questions and correct answers in Gleim FAA Aeronautical Knowledge Test Book as recognition of items to assist in test performance. Students will independently take the practice exam in the back of the Gleim Private Pilot FAA Knowledge Test book

### **HOURS 34-36**

The final exam will be administered and scored. Sport Pilot candidates will received 40 questions and Private Pilots will receive 60 questions. Those passing with a minimum of 80% will receive endorsements to take the FAA aeronautical written examination at FAA Authorized Test Centers. Students completing the course will receive a certificate of completion regardless of score. Completion is not authorization to take the FAA Examination. Only those passing with 70% or greater may take the formal written examination at an FAA Authorized Test Center.

### **CONCLUDING NOTE**

As of November 1, 2011 **NO student completing the course has ever failed the FAA Written Examination** since 2003. Check current status at <http://groundschool.weebly.com>