

Titanium Autogyro (TAG)

SPORT PILOT GROUND TRAINING SYLLABUS GYROPLANE

Prerequisites:

Students Must be 17 yrs old and hold a Student Pilot certificate and a Valid US Drivers Licence. Or a Medical Certificate with a student pilot certificate.

Be able to speak, read, write and understand English.

Instructors must have a Sport CFI with Gyroplane or higher CFI certificate

Have a Min of 250 Hours Flight Experience

75 hours in Gyroplanes

10 hours in Specific make and model to be used

***Meet the experience requirements established in accordance with FAR
61.411***

GROUND TRAINING COURSE OBJECTIVES

The student will obtain the necessary aeronautical knowledge and meet the prerequisites specified in FAR 61.309 to successfully pass the sport pilot knowledge test.

GROUND TRAINING COURSE COMPLETION STANDARDS

The student will demonstrate through stage knowledge tests and school records that (s)he meets the prerequisites specified in FAR 61.309 and has the aeronautical knowledge necessary to pass the sport pilot knowledge test.

Topic		Min. Time in Hours
Stage One		
1	Airports	1.5
2	Airspace	1.5
3	Federal Regulations-FAR Part 1 through 71	1.0
4	Federal Regulations-FAR Part 91.3 through 91.131 and 91.155-91.417 and NTSB 830 Stage one test	2
Stage Two		
5	Aeromedical Factors and Decision Making	2
6	Aviation Weather and services	3
7	Sectional charts and airspace	1.5
8	Navigation and preflight prep Stage two test	1.5
Stage Three		
9	Gyroplanes and aerodynamics	2
10	Aircraft instruments	1.5
11	Aircraft engines and systems	1.5
12	Gyroplane performance, weight and balance	3

End-of Course Knowledge Test

Stage One

Stage One Objective

The student will learn about the operation of various airplane systems, airport operations, radio communication procedures, and the National Airspace System (NAS). Additionally, the student will become familiar with pertinent Federal Aviation Regulations (FARs) and the accident-reporting requirements of the National Transportation Safety Board (NTSB).

Stage One Completion Standards

Stage One will have been successfully completed when the student passes the Stage One Knowledge Test with a minimum passing grade of 80%.

GROUND LESSON 1: AIRPORTS

Objective

To develop the student's knowledge of airports, wake turbulence and collision avoidance. radio communication procedures and phraseology, and emergency locator transmitters.

Text References

Pilot Handbook, Study Unit 3, "Airports, ATC, and Airspace"

Sport Pilot FAA Knowledge Test, Study Unit 1, "Airports"

Pilot handbook study Unit 3

- 3.1 Runway, Taxiway Markings
- 3.2 Airport Lighting
- 3.3 Visual Glideslope Indicators
- 3.4 Wind, Landing direction indicators and segmented Circles
- 3.5 Airport traffic Patterns
- 3.7 Wake Turbulence
- 3.8 Collision Avoidance
- 3.14 Ground Control

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- 1.1 Runway Markings
 - 1.2 Airport Beacons
 - 1.3 Airport Traffic Patterns
 - 1.4 Visual Approach Slope Indicators or VASI
 - 1.5 Wake Turbulence
 - 1.6 Collision Avoidance
 - 1.7 Ground Control
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Completion Standards

The lesson will have been successfully completed when the student answers the questions in Study Unit 1, "Airports." of *Sport Pilot FAA Knowledge Test*, *FAA Test Prep Software* with a minimum passing grade of 80%.

GROUND LESSON 2: AIRSPACE

Objective

To develop the student's knowledge of airspace and techniques for operating in controlled airspace.

Text References

Pilot Handbook, Study Unit 3, "Airports, Air Traffic Control, and Airspace" *Sport Pilot FAA Knowledge Test*, Study Unit 2, "Airspace"

Pilot handbook study Unit 3

- 3.9 Radio Communications
- 3.10 Airports without Control Tower
- 3.11 Automated Weather Reporting Systems
- 3.12 Airports with Control Towers
- 3.13 (ATIS)
- 3.18 Emergencies
- 3.19 Radio Failure Procedures
- 3.20 Emergency Locator Transmitter (ELT)
- 3.22 Transponder Operation
- 3.24 General Dimensions of Airspace
- 3.25 Controlled and uncontrolled Airspace
- 3.27-3.31 Class B,C,D,E,G Airspace
- 3.32 Special Use Airspace
- 3.33 Other Airspace Areas

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- 2.1 Airspace overview
 - 2.2 Class D Airspace
 - 2.3 Class C Airspace
 - 2.4 Transponder Codes
 - 2.5 Radio Phraseology
 - 2.6 ATC Traffic Advisories
 - 2.7 ATC Light Signals
 - 2.8 Emergency Locator Transmitters
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Completion Standards

The lesson will have been successfully completed when the student answers the questions in Study Unit 2, "Airspace," of *Sport Pilot FAA Knowledge Test*, FAA Test Prep Software with a minimum passing grade of 80%.

Pilot Handbook Sport Pilot FAA Knowledge Test Notes: Dates Studied Date Completed

GROUND LESSON 3: FEDERAL REGULATIONS — FAR PARTS 1 THROUGH 71

Objective

To develop the student's knowledge of pertinent Federal Aviation Regulations (FARs). **Text**

References

Pilot Handbook, Study Unit 4, "Federal Aviation Regulations" *Sport Pilot FAA Knowledge Test*, Study Unit 3, "Federal Aviation Regulations — FAR Parts 1 through 71"

Pilot handbook study Unit 4

- 4.1 Federal Aviation Regulations
- 4.2 Part 1 - Definitions and Abbreviations
- 4.3 Certification procedures for products and parts
- 4.4 Part 39 - Airworthiness Directives
- 4.5 Part 43 - Maintenance, Preventive, Rebuilding, and Alteration
- 4.6 Part 61 - Certification: Pilots, Flight instructors, And Ground Instructors

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- 3.1 FAR Part 1
- 3.2 FAR Part 22
- 3.3 FAR Part 39
- 3.4 FAR Part 43
- 3.5 FAR Part 61
- 3.6 FAR Part 71

Completion Standards

The lesson will have been successfully completed when the student answers the questions in Study Unit 3, "Federal Aviation Regulations — FAR Parts 1 through 71," of *Sport Pilot FAA Knowledge Test*, FAA Test Prep Software with a minimum passing grade of 80%.

Pilot Handbook *Sport Pilot FAA Knowledge Test* Notes: Dates Studied Date Completed

GROUND LESSON 4: FEDERAL REGULATIONS — FAR PARTS 91.3 THROUGH 91.131 Objective

To develop the student's knowledge of pertinent Federal Aviation Regulations (FARs).

Text References

Pilot Handbook, Study Unit 4. "Federal Aviation Regulations"

Sport Pilot FAA Knowledge Test, Study Unit 4, "Federal Aviation Regulations — FAR Parts 91.3 through 91.131"

Pilot handbook study Unit 4

4.8 Part 91 - General Operating and Flight Rules (91.3-91.131)

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- 4.1 FAR 91.3
 - 4.2 FAR 91.7 - 91.9
 - 4.3 FAR 91.15 - 91.107
 - 4.4 FAR 91.111 - 91.121
 - 4.5 FAR 91.123 - 91.131
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Completion Standards

The lesson will have been successfully completed when the student answers the questions in Study Unit 4, "Federal Aviation Regulations — FAR Parts 91.3 through 91.131," of *Sport Pilot FAA Knowledge Test*, FAA Test Prep Software with a minimum passing grade of 80%.

Pilot Handbook Sport Pilot FAA Knowledge Test Notes: Dates Studied Date Completed

GROUND LESSON 5: FEDERAL REGULATIONS — FAR PARTS 91.155 THROUGH 91.417 AND NTSB 830

Objective

To develop the student's knowledge of pertinent Federal Aviation Regulations (FARs) and the accident reporting rules of the National Transportation Safety Board (NTSB).

Text References

Pilot Handbook, *Study Unit 4, "Federal Aviation Regulations"*

Sport Pilot FAA Knowledge Test, Study Unit 5, "Federal Aviation Regulations — FAR Parts 91.155 through 91.417 and NTSB 830"

Pilot handbook study Unit 4

- 4.8 Part 91 - General Operating and Flight Rules (91.155 - 91.417)
- 4.9 NTSB Part 830
- 4.10 Summary of Current FAR Part Numbers

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- 5.1 FAR 91.155 - 91.159
 - 5.2 FAR 91.203 - 91.319
 - 5.3 FAR 91.403 - 91.417
 - 5.4 NTSB Part 830
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Completion Standards

The lesson will have been successfully completed when the student answers the questions in Study Unit 5, "Federal Aviation Regulations — FAR Parts 91.155 through 91.417 and NTSB 830," of *Sport Pilot FAA Knowledge Test*, FAA Test Prep Software passing grade of 80%.

STAGE ONE KNOWLEDGE TEST

Objective

To evaluate the student's understanding of the material presented during Ground Lesson 1 through Ground Lesson 5. The Stage One Knowledge Test consists of 20 questions found on pages 63 and 64.

Content

Lesson

- 1 Airports
- 2 Airspace
- 3 Federal Regulations — FAR Parts 1 through 71
- 4 Federal Regulations — FAR Parts 91.3 through 91.131
- 5 Federal Regulations — FAR Parts 91.155 through 91.417 and NTSB 830

STAGE TWO

Stage Two Objective

To develop the student's knowledge of aeronautical decision making as well as aviation weather and weather services provided to pilots for safe VFR flight planning. Finally, the student will learn how to plan and execute a safe VFR cross-country flight.

Stage Two Completion Standards

Stage Two will have been successfully completed when the student passes the Stage Two Knowledge Test with a minimum passing grade of 80%.

Topic	Time
Aeromedical Factors and Decision Making (ADM)	2.0
Aviation Weather and Services	3
Sectional Charts and Airspace	1.5
Navigation and Preflight Preparation	1.5
Stage Two Knowledge Test	

GROUND LESSON 6: AEROMEDICAL FACTORS AND AERONAUTICAL DECISION MAKING (ADM)

Objective

To develop the student’s knowledge of the medical factors related to flight and to the aeronautical decision making process (ADM).

Text References

Pilot Handbook, Study Unit 6, “Aeromedical Factors and Aeronautical Decision Making (ADM)”

Sport Pilot FAA Knowledge Test, Study Unit 6, “Aeromedical Factors and Aeronautical Decision Making (ADM)”

Pilot handbook study Unit 6	Sport Pilot Knowledge Test prep software
6.1 Fitness for Flight	6.1 Hypoxia
6.2 Hypoxia	6.2 Hyperventilation
6.3 Dehydration	6.3 Alcohol
6.4 Hyperventilation	6.4 Spacial Disorientation
6.5 Carbon Monoxide Poisoning	6.5 Dehydration
6.6 Decompression Sickness after Scuba Diving	6.6 Vision
6.7 Motion Sickness	6.7 Carbon Monoxide
6.8 Sinus and Ear Block	6.8 Aeronautical Decision Making (ADM)
6.9 Spacial Disorientation	6.9 Ear Block
6.10 Illusions in Flight	
6.11 Vision	
6.12 Aeronautical Decision Making (ADM)	
6.13 Weather -Related Decision Making	
6.14 Stress and Flying	
6.15 Identifying the enemy	
6.16 Cockpit Resource Management (CRM)	

Completion Standards

The lesson will have been successfully completed when the student answers the questions in Study Unit 6, “Aeromedical Factors and Aeronautical Decision Making (ADM),” of *Sport Pilot FAA Knowledge Test*, FAA Test Prep Software with a minimum passing grade of 80%.

GROUND LESSON 7: AVIATION WEATHER

Objective

To develop the student’s knowledge of the fundamentals of

*weather. **Text References***

Pilot Handbook, Study Unit 7, “Aviation Weather”

Sport Pilot FAA Knowledge Test, Study Unit 7, “Aviation Weather”

Pilot handbook study Unit 7	Sport Pilot Knowledge Test prep software
7.1 The Earth’s Atmosphere	7.1 Causes of Weather
7.2 Temperature	7.2 Convective Currents
7.3 Atmospheric Pressure	7.3 Fronts
7.4 Wind	7.4 Thunderstorms
7.5 Moisture, Cloud formation, Precipitation	7.5 Icing
7.6 Stable and Unstable Air	7.6 Mountain Wave
7.7 Clouds	7.7 Wind Shear
7.8 Air Masses and Fronts	7.8 Temp/Dew Point and Fog
7.9 Turbulence	7.9 Clouds
7.10 Icing	7.10 Stability of Air Masses
7.11 Thunderstorms	7.11 Temperature inversions
7.12 Fog	

Completion Standards

The lesson will have been successfully completed when the student answers the questions in Study Unit 7, “Aviation Weather,” of Sport Pilot FAA Knowledge Test, FAA Test Prep Software with a minimum passing grade of 80%.

Pilot Handbook Sport Pilot FAA Knowledge Test Notes: *Dates Studied Date Completed*

GROUND LESSON 8: WEATHER SERVICES

Objective

To develop the student's ability to interpret and use weather charts, reports, briefings, and forecasts.

Text References

Pilot Handbook, *Study Unit 8, "Aviation Weather Services"*

Sport Pilot FAA Knowledge Test, *Study Unit 8, "Weather Services"*

Pilot handbook study Unit 8	Sport Pilot Knowledge Test prep software
<ul style="list-style-type: none"> 8.1 Flight Service Station 8.2 Aviation Routine Weather Report (METAR) 8.3 Pilot Weather Report (PIREP) 8.4 Terminal Aerodrome Forecast (TAF) 8.5 Aviation Area Forecast (FA) 8.6 In-Flight Aviation Weather Advisories 8.7 Winds and Temp Aloft Forecast 8.8 Surface Analysis Chart 8.9 Weather Depiction Chart 8.10 Radar Summary Chart 8.11 Short-Range Surface Prognostic Chart (PROG) 8.12 Low-Level Significant Weather Chart(SIGWX) 8.13 Duats 8.14 Aviation Weather Resources on the internet 	<ul style="list-style-type: none"> 8.1 Weather Briefings 8.2 Aviation Routine weather Report (METAR) 8.3 Sigmets and Airmets 8.4 Pilot Weather Report (PIREP) 8.5 Aviation Area Forecast 8.6 Terminal Aerodrome Forecast (TAF) 8.7 Weather Depiction Charts 8.8 Radar Summary Charts and Weather Reports 8.9 En Route Flight Advisory Service (EFAS) 8.10 Wind and Temperature Aloft Forecast (FB)

Completion Standards

The lesson will have been successfully completed when the student answers the questions in Study Unit 8, "Weather Services," of *Sport Pilot FAA Knowledge Test*, FAA Test Prep Software with a minimum passing grade of 80%.

GROUND LESSON 9: SECTIONAL CHARTS AND AIRSPACE

Objective

To develop the student's ability to interpret and use sectional charts to identify airspace, altitudes, identifying landmarks, radio frequencies, and lines of latitude and longitude.

Text References

Pilot Handbook, Study Unit 9, "Navigation: Charts, Publications, Flight Computers" *Sport Pilot FAA Knowledge Test*, Study Unit 9, "Sectional Charts and Airspace"

Pilot handbook study Unit 9

- 9.1 VFR Navigation Charts
- 9.2 Longitude and Latitude
- 9.3 Sectional Chart Symbolology

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- 9.1 Airspace and Altitudes
- 9.2 Identifying Landmarks
- 9.3 Radio Frequencies
- 9.4 Longitude and Latitude

Completion Standards

The lesson will have been successfully completed when the student answers the questions in Study Unit 9, "Sectional Charts and Airspace," of *Sport Pilot FAA Knowledge Test*, FAA Test Prep Software with a minimum passing grade of 80%.

Pilot Handbook *Sport Pilot FAA Knowledge Test* Notes: Dates Studied Date Completed

GROUND LESSON 10: NAVIGATION AND PREFLIGHT PREPARATION

Objective

To develop the student's ability to properly plan a VFR cross-country flight, as well as develop the ability to use navigation charts, publications, and a flight computer.

Text References

Pilot Handbook, Study Unit 9, "Navigation: Charts, Publications, Flight Computers" and Study Unit 11, "Cross-Country Flight Planning"

Sport Pilot FAA Knowledge Test, *Study Unit 10, "Navigation and Preflight Preparation"*

Pilot handbook study Unit 9

- 9.4 FAA Advisory Circulars
- 9.5 Aeronautical information Manual (FAR/AIM)
- 9.6 Airport/Facility Directory (A/FD)
- 9.7 Notice to Airmen (NOTAM) System
- 9.8/9.9 Flight Computers
- 9.10 The Calculator Side of the Flight Computer
- 9.11 Conversion Statute mile to Knots and back
- 9.12 Speed, Distance, and Time
- 9.13 Fuel Computations
- 9.14 True Airspeed and Density Altitude
- 9.15 Corrected Altitude
- 9.16 Off-Course Correction
- 9.17 Radius of Action
- 9.18 Other Conversions
- 9.19 Temperature Conversions
- 9.20 The Wind Side of the Computer
- 9.21 Magnetic Heading and Ground Speed
- 9.22 Wind Direction and Speed
- 9.23 Altitude for Favorable Winds
- Electronic Flight Computers

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- 10.1 Density Altitude
- 10.2 Preflight Preparation
- 10.3 Weight and Balance
- 10.4 Navigation
- 10.5 GPS Navigation
- 10.6 Determining Wind Direction and Speed
- 10.7 VFR Flight Plan
- 10.8 Preflight Inspection
- 10.9 FAA Advisory Circulars
- 10.10 Airport Facility Directory

Completion Standards

The lesson will have been successfully completed when the student answers the questions in Study Unit 10. "Navigation and Preflight Preparation," of Sport Pilot FAA Knowledge Test, *FAA Test Prep Software* with a minimum passing grade of 80%.

STAGE TWO KNOWLEDGE TEST

Objective

To evaluate the student's understanding of the material presented during Ground Lesson 6 through Ground Lesson 10. The Stage Two Knowledge Test consists of 20 questions found on pages 65 and 66.

Content

Lesson

6	<i>Aeromedical Factors and Aeronautical Decision Making (ADM)</i>
7	<i>Aviation Weather</i>
8	<i>Weather Services</i>
9	<i>Sectional Charts and Airspace</i>
10	<i>Navigation and Preflight Preparation</i>

STAGE THREE

Stage Three Objective

To develop the student's knowledge of airplanes and the aerodynamic principles of flight. The student will learn about the operation of various airplane systems. Finally, the student will learn how to predict airplane performance and how to control the weight and balance of the airplane.

Stage Three Completion Standards

Stage Three will have been successfully completed when the student passes the Stage Three Knowledge Test with a minimum passing grade of 80%.

Topic	Min Time in Hours
GyroPlanes and Aerodynamics	2.0
Aircraft Instruments	1.5
Aircraft Engines and Systems	1.5
Aircraft Performance and Weight and Balance	3.0
Stage Three Knowledge Test	1.0
End of Course Test	2.5

GROUND LESSON 11: GYROPLANES AND AERODYNAMICS

Objective

To develop the student's knowledge of Gyroplanes, the aerodynamics of flight, and Gyroplane stability.

Text References

Pilot Handbook, *Study Unit 1, "Airplanes and Aerodynamics"*

Sport Pilot FAA Knowledge Test, *Study Unit 11, "Airplanes and Aerodynamics"*

Pilot handbook study Unit 1

- 1.1 Definitions
- 1.2 The Aircraft
- 1.3 Axes of Rotation
- 1.4 Flight Controls and Surfaces
- 1.5 Forces Acting in Flight
- 1.6 Dynamics in Flight
- 1.7 Ground Effect
- 1.8 How Gyroplanes Turn
- 1.9 Torque Effect
- 1.10 Aircraft Stability
- 1.11 Loads and Load Factors
- 1.12 Gyro below Power Curve Flying

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- 11.1 Flight Controls
- 11.2 Aerodynamic Forces
- 11.3 Angle of Attack
- 11.4 Fundamentals of Flight
- 11.5 Stalls and Spins
- 11.6 Frost
- 11.7 Ground Effect
- 11.8 Gyroplane Turn
- 11.9 Aircraft Stability
- 11.10 Torque and P-Factor in Gyros
- 11.11 Load Factor

Completion Standards

The lesson will have been successfully completed when the student answers the questions in Study Unit 11, "Airplanes and Aerodynamics," of *Sport Pilot FAA Knowledge Test*, FAA Test Prep Software with a minimum passing grade of 80%.

Pilot Handbook Sport Pilot FAA Knowledge Test Notes: Dates Studied Date Completed

GROUND LESSON 12: GYROPLANE INSTRUMENTS

Objective

To develop the student's knowledge of the Gyroplane's

*instruments. **Text References***

Pilot Handbook, *Study Unit 2, "Gyroplane Instruments, Engines, and Systems"* Sport Pilot FAA Knowledge Test, *Study Unit 12, "Gyroplane Instruments"*

Pilot handbook study Unit 7

- 2.1 Pitot-Static System
- 2.2 Altimeter
- 2.3 Vertical Speed if used*
- 2.4 Airspeed indicator
- 2.5 Gyroscopic Flight Instruments if used*
- 2.6 Turn Coordinator If Used*
- 2.7 Turn and Slip if Used*
- 2.8 Attitude Indicator if Used*
- 2.9 Heading Indicator if Used*
- 2.10 Magnetic Compass
- 2.11 Compass Errors

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- 12.1 Magnetic Compass
- 12.2 Pitot-Static System
- 12.3 Airspeed Indicator
- 12.4 Altimeter
- 12.5 Types of Altitude
- 12.6 Setting the Altimeter
- 12.7 Altimeter Errors
- 12.8 Gyroscopic instruments
- 12.9 Glass Cockpits

* Not all Gyroplanes will be equipped with these Instruments

Completion Standards

The lesson will have been successfully completed when the student answers the questions in Study Unit 12, "Airplane Instruments," of Sport Pilot FAA Knowledge Test, FAA Test Prep Software with a minimum passing grade of 80%.

Pilot Handbook Sport Pilot FAA Knowledge Test Notes: *Dates Studied Date Completed*

GROUND LESSON 13: GYROPLANE ENGINES AND SYSTEMS

Objective

To develop the student's knowledge of the Gyroplane's engines and systems. **Text**

References

Pilot Handbook, Study Unit 2, "Gyroplane Instruments, Engines, and Systems" *Sport Pilot FAA Knowledge Test*, Study Unit 13, "Gyroplane Engines and Systems"

Pilot handbook study Unit 7

- 2.12 Glass Cockpit Instrumentation
- 2.13 Airplane Engines
- 2.14 How an Engine Operates
- 2.15 Ignition System
- 2.16 Induction System
- 2.17 Fuel System
- 2.18 Oil System
- 2.19 Cooling System
- 2.20 Propellers
- 2.21 Full Authority Digital Engine Control
- 2.22 Electrical System
- 2.23 Landing Gear System
- 2.24 Environmental System
- 2.25 Deice and Anti-ice Systems

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- 13.1 Electrical Systems
- 13.2 Engine Temperature
- 13.3 Engine Ignition System
- 13.4 Carb Ice
- 13.5 Carb Heat
- 13.6 Fuel/Air Mixture
- 13.7 Abnormal Combustion
- 13.8 Aviation Fuel Practices
- 13.9 Miscellaneous Airspeed Questions
- 13.10 Taxiing Technique
- 13.11 Starting the Engine

Note :Most GyroPlanes are not equipped to fly in Ice conditions

Completion Standards

The lesson will have been successfully completed when the student answers the questions in Study Unit 13, "Airplane Engines and Systems," of *Sport Pilot FAA Knowledge Test*, FAA Test Prep Software with a minimum passing grade of 80%.

Pilot Handbook *Sport Pilot FAA Knowledge Test* Notes: Dates Studied Date Completed

GROUND LESSON 14: GYROPLANE PERFORMANCE AND WEIGHT AND BALANCE

Objective

To develop the student’s ability to determine airplane performance, including weight and balance. Additionally, the student will learn the adverse effects of exceeding the airplane’s limitations.

Text References

Pilot Handbook, Study Unit 5, “Gyroplane Performance and Weight and Balance”

Sport Pilot FAA Knowledge Test, *Study Unit 14, “Airplane Performance and Weight and Balance”*

Pilot handbook study Unit 5

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- 5.1 Determinants of Aircraft Performance
- 5.2 Standard Atmosphere
- 5.3 Pressure Altitude
- 5.4 Density Altitude
- 5.5 Takeoff Performance
- 5.6 Climb Performance
- 5.7 Cruise and Range Performance
- 5.8 Glide Performance
- 5.9 Crosswind Performance
- 5.10 Landing Performance
- 5.11 Weight and Balance Overview
- 5.12 Weight and Balance Terms
- 5.13 Basic Principles of Weight and Balance
- 5.14 Methods of Determining Weight and Balance
- 5.15 Center of Gravity Calculations
- 5.16 Center of Gravity Charts
- 5.17 Center of Gravity Tables
- 5.18 Weight Changes and Shift Computations

- 14.1 Density Altitude Computations
- 14.2 Takeoff Distance
- 14.3 Climb Performance and Thrust
- 14.4 Range and Endurance
- 14.5 Cruise Power Settings
- 14.6 Crosswind Components
- 14.7 Glides and Glide Speed
- 14.8 Landing Distance
- 14.9 Weight and Balance Definitions
- 14.10 Center of Gravity Graphs
- 14.11 Center of Gravity Tables

Completion Standards

The lesson will have been successfully completed when the student answers the questions in Study Unit 14, “Airplane Performance and Weight and Balance,” of Sport Pilot FAA Knowledge Test, FAA Test Prep Software with a minimum passing grade of 80%.

Pilot Handbook Sport Pilot FAA Knowledge Test Notes: *Dates Studied Date Completed*

STAGE THREE KNOWLEDGE TEST Objective

To evaluate the student's understanding of the material presented during Ground Lesson 11 through Ground Lesson 14. The Stage Three Knowledge Test consists of 20 questions

CONTENT

LESSON

- | | |
|----|--|
| 11 | Gyroplanes and Aerodynamic |
| 12 | Gyroplane Instruments |
| 13 | Gyroplane Engines and Systems |
| 14 | Gyroplane Performance and Weight and Balance |

Completion Standards

This lesson will have been successfully completed when the student has completed the Stage Three Knowledge Test with a minimum passing grade of 80%.

END-OF-COURSE KNOWLEDGE TEST Objective

To evaluate the student's comprehension of the material covered in the ground training course and to determine the student's readiness to take the FAA Sport Pilot Knowledge Test. The End-of-Course Knowledge Test consists of 40 questions found on pages 69 through 71.

Content

Practice Sport Pilot Knowledge Test **Completion**

Standards

The lesson will have been successfully completed when the student has completed the practice Sport Pilot Knowledge Test with a minimum passing grade of 80%.