

Reading Assignment
Graham's Ground School / AeroDynamic Aviation
Private Pilot Ground School

The following references are reading assignments to be completed before each week's presentation. Your goal with this reading is NOT to master the material; your goal is to gain familiarity. Most of the material is too technical or complicated to master in one reading. The whole point of Ground School is to guide you through all the material and help you understand what is most important for a new Private Pilot student.

These are the primary sources we will use throughout the course. The PHAK and AFH references below are based on the most current edition of these documents. Any previous editions of PHAK or AFH may have different page or paragraph numbers.

FAR - Federal Aviation Regulations

AIM - Aeronautical Information Manual

PHAK - Pilot Handbook of Aviation Knowledge (2024)

POH - Pilot Operating Handbook for Cessna 172P

AFH - Airplane Flying Handbook (2024)

Week 1: Intro to Pilot Training, and Pilot Qualifications

FAR 61.1-61.63, 61.81-61.95, 61.102-61.109

Week 2: Airworthiness Requirements

PHAK Chapter 9, Flight Manuals and Other Documents

FAR 91.1-91.9, 91.103, 91.201-225, 91.401-417; FAR 43.3(g),

FAR 43 Appendix A(c); FAR 21.197-19; 49 CFR Part 830

Week 3: Performance and Limitations

PHAK Chapter 5, Aircraft Design Characteristics, Load Factors, Weight and Balance

PHAK Chapter 11, Aircraft Performance

POH Section 2, Limitations; Section 5 Performance; Section 6, Weight and Balance

Week 4: Systems, Malfunctions, and Emergency Equipment

PHAK Chapter 7, Aircraft Systems

AFH Chapter 17, Emergency Procedures

POH Chapter 3, Emergency Procedures; Chapter 7, Airplane & Systems Descriptions

Week 5: Aerodynamics, Spin Awareness, & Human Factors

PHAK Chapter 4, Principles of Flight; Chapter 5, Aerodynamics of Flight (EXCLUDE Effect of Wing Planform and High Speed Flight)

AFH Chapter 4, Maintaining Aircraft Control (Slow Flight, Stalls, Spin, Spin Recovery)

PHAK Chapter 17, Aeromedical Factors

Week 6: National Airspace System

FAR 91.111-91.147, especially 91.125-91.135

AIM Chapter 3, Airspace

PHAK Chapter 15, Airspace

Week 7: Weather Theory

PHAK Chapter 12, Weather Theory

Aviation Weather Handbook (FAA-H-8083-28) This is a huge document. I

recommend it as a reference tool, not as something to read this week.

Week 8: Weather Services

PHAK Chapter 13 Weather Services

Aviation Weather Handbook (FAA-H-8083-28)

<https://aviationweather.gov/help/> Watch webinar on the first page.

Week 9: Cross-Country Flight Planning & Night Preparation

PHAK Chapter 16, Introduction, Aeronautical Charts, Latitude and Longitude, Effect of Wind, Pilotage, Dead Reckoning, Flight Planning, Charting the Course

Resources to bring to class:

(1) POH Section 5, Performance

(2) [AeroDynamic Aviation VFR Cross-Country Planning Guide](#)

(<https://www.aerodynamicaviation.com/wp-content/uploads/2015/11/AeroDynamics-XC-Guide.pdf>)

(3) [AeroDynamic Aviation Navigation Log](#)

(<https://www.aerodynamicaviation.com/wp-content/uploads/2019/07/Fillable-Nav-Log-revised.pdf>)

(4) A/FD (Airport Facilities Directory) (aka Chart Supplement)

(5) San Francisco Sectional Chart

(6) E6-B Flight Computer

(7) Plotter

Week 10: Radio Navigation & Final Review

PHAK Chapter 16, Ground Based Navigation (to end of chapter)