**Reedley College Flight Science**

**Flight 101 (51379) Private Pilot Ground School Fall 2016**

**Instructor:** Donald Turrentine e-mail: [donald.turrentine@reedleycollege.edu](mailto:donald.turrentine@reedleycollege.edu) Phone: 638-0300 ext.3475

**Class Location:** Meets in Aero 5A & 5B

**Daily Schedule:** Lecture: 1:20 – 3:10pm

**Holidays:** Labor Day – September 5th, Veterans Day – November 11th, Thanksgiving – November 24th – 25th.

**Important Dates:** Last date for a refund. – Aug. 26nd  Drop date to avoid a “W”. – Sept 2nd, Last day to drop. - Oct. 14th

**Course Advisories:** Eligibility for English 125 or 130, and English 126, and Mathematics 201.

**Course Objectives:** The purpose of this course is to provide ground school training for individuals seeking a private pilot’s license. Some of the topics covered will include principles of flight, aerodynamics, aircraft controls, engine systems, basic weather and weather services for pilots, navigation, radio communication, and Federal Aviation Regulations applicable to beginning pilots flying under visual flight rules.

**Course Outcomes:** Upon successful completion of this course, you will be able to describe how stress, fatigue, knowledge, and skill level affect the decision making process as applied to flight operations. Discuss how relatively inflexible scientific requirements for manned flight dictate common aircraft structural design elements. Explain how the aircrafts instruments provide information regarding the airplanes attitude, direction, altitude, and speed. Describe the factors involved with safe flight in various flight environments. Describe what elements are involved with successful communication with other aircraft and ground/traffic control. Evaluate how day-to-day weather elements like clouds, wind, and rain affect flight operation. Interpret graphic weather products such as surface analysis, weather depiction, and radar summary charts. Interpret published aircraft performance information. Describe the effect of weight and balance on flight characteristics and safe flight. Read and interpret navigation charts. Describe the various physiological demands placed on the human body during flight. Describe the pilot-in commend responsibilities.

**Canceled Class Notification:** If a Flight class has to be cancelled, a cancellation notice will be placed on the classroom door. In addition, the cancelled class will be posted on the Reedley College website.

**Final Exam:**

A two-hour comprehensive final exam worth 20 % of your total grade will be given at the end of the semester during finals week. You are required to take the final exam. Your final exam will be on December 12th.

**Required Textbooks:**

Jeppesen, Private Pilot Manual. 2014

***Recommended* Textbooks:**

1. Jeppesen. Private Pilot FAA Airman Knowledge Test Guide. Jeppesen, 2016
2. Jeppesen. FAR/AIM 2016. Jeppesen, 2016
3. FAA-H-8083-25A. Pilot’s Handbook of Aeronautical Knowledge. FAA 2003

The FAA has published handbooks on the subject of pilotage and aeronautics. These books are free to download and can be saved in the Adobe Acrobat .pdf format. I recommend you also use these handbooks to supplement your studies.

<http://www.faa.gov/regulations_policies/handbooks_manuals/aviation/pilot_handbook/>

<http://www.faa.gov/regulations_policies/handbooks_manuals/aircraft/airplane_handbook/>

**Grading Policy**

The ground school course will be broken up into five Parts. Scores for each of these “Parts” are calculated independently of each other but they will be combined at the end of each semester and added to your final exam score as the Reedley College grade for that semester. The Part scores will account for 80% of the semester grade and the final exam will account for the remaining 20%.

***Important Note: Each one of the* 5 *Part scores must be at or above 80% when completed to receive credit toward the endorsement to take the FAA written Private Pilot Exam. The overall College grade has no bearing upon meeting these guidelines.***

To calculate the semester grade for Reedley College, each completed “Part” score explained above is then "weighted" in proportion to the number of hours of instruction it contains. These weighted scores are then combined with the final exam score, which is always 20% of the final grade. This score is the semester college grade. The college grade is an average of all work completed in the course during that semester, including the final exam.

**College Grading System: (sample calculations)**

**Part Totals Hours per Subject Weight Factor**

Part I 85% 10 0.2

Part II 90% 25 0.5

Part III 80% 15 0.3

Sub total: 50 1.0

To arrive at the College grade, multiply each Part total by the weight factor (determined by Part length), then add the products together. For example:

Part I: (85%) Part total (X) weight factor (0.2) = 17.0%

Part II: (90%) Part total (X) weight factor (0.5) = 45.0%

Part III: (80%) Part total (X) weight factor (0.3) = 24.0%

Total of all "weighted" Parts: 86.0%

Final Exam Score 98.0%

Multiply the “weighted” total by 80%, then add the final exam score weighted at 20% for the “College” total score.

Formula:(86% X 80%) plus (98% X 20%)  **= 88.4%**

**The College letter grade scale is as follows:**

100%-90% = A 89%-80% = B 79%-70% = C 69%-60% = D 59% and below = F.

**Attendance Policy:** Students are expected to meet in the assigned area for roll call no later than 1:20 pm each class day.

**If a student misses 3 or more class sessions in any semester, that student may be dropped from the course.**

Since good work habits are needed to become a successful pilot, a student who habitually arrives late for class will be subject to dismissal from the Flight course.

**Student Parking:** Reedley College parking permits are required for all vehicles on the Reedley College campus. Students will park only in non-staff designated parking areas. An overflow dirt parking lot on the west side of the campus is also available for parking if the weather permits. Parking is not allowed anywhere near the Aero building. You may purchase a parking permit from the bookstore for each semester you attend class. Any violation of the above rules may result in a ticket.

**Behavioral Standards:** Please do not enter the classroom while another class is in progress. Please respect other persons and their property. Any disrespect to others may result in disciplinary action. Disruptive behavior, inappropriate language, or anything that could be viewed as sexual harassment is not acceptable. No food or drink is allowed in the Aeronautics classrooms or lab except in designated areas. The use of any form of tobacco is only permitted outside the South entrance to the Aeronautics building, please help keep that area clean.

**Academic Dishonesty:** Students at Reedley College are entitled to the best education that the college can make available to them. Students, their instructors, and their classmates share the responsibility to ensure that this education is honestly attained. Because cheating, plagiarism, and collusion in dishonest activities erode the integrity of the college, each student is expected to exert an entirely honest effort in all academic endeavors. Academic dishonesty in any form is a very serious offense and will incur serious consequences.

*Cheating*is the act or attempted act of taking an examination or performing an assigned, evaluated task in a fraudulent or deceptive manner, such as having improper access to answers, in an attempt to gain an unearned academic advantage. Cheating may include, but is not limited to, copying from another’s work, supplying one’s work to another, giving or receiving copies of examinations without an instructor’s permission, using or displaying notes or devices inappropriate to the conditions of the examination, allowing someone other than the officially enrolled student to represent the student, or failing to disclose research results completely.

*Plagiarism*is a specific form of cheating: the use of another’s words or ideas without identifying them as such or giving credit to the source. Plagiarism may include, but is not limited to, failing to provide complete citations and references for all work that draws on the ideas, words, or work of others, failing to identify the contributors to work done in collaboration, submitting duplicate work to be evaluated in different courses without the knowledge and consent of the instructors involved, or failing to observe computer security systems and software copyrights. Incidents of cheating and plagiarism may result in any of a variety of sanctions and penalties, which may range from a failing grade on a particular examination, paper, project, or assignment in question to a failing grade in the course, at the discretion of the instructor and depending on the severity and frequency of the incidents.

**Technological Gadgets:** Mobile electronic devices such as MP3 players and mobile phones must be silenced and put away during class. There is an exception for tablets and laptops, but these devices are only allowed to be used in class during lecture and discussion for note taking. Computer use for note taking must be approved by the instructor and proof of those notes will be periodically checked by your instructor. If this privilege is abused or computer use becomes distracting, I will suspend this privilege. Mobile phone conversations, including texting, are distracting in the classroom setting and are not allowed. Please wait until break to use your phones.

**Special Needs Requests**

If you have a verified need for an academic accommodation or materials in alternate media (i.e., Braille, large print, electronic text, etc.) per the Americans with Disabilities Act (ADA) or Section 504 of the Rehabilitation Act, please contact me as soon as possible.

Reading Assignments & Lecture Topics

Part I - Fundamentals of Flight:

Discovering Aviation

* pilot training
* aviation opportunities
* introduction to human factors

Airplane Systems

* airplanes
* the powerplant and related systems
* flight instruments

Aerodynamic Principles

* four forces of flight
* stability
* aerodynamics of maneuvering flight

Part II – Flight Operations:

The Flight Environment

* safety of flight
* airports
* aeronautical charts
* airspace

Communication & Flight Information

* radar and ATC services
* radio procedure
* sources of flight information

Part III – Aviation Weather:

Meteorology for Pilots

* weather theory
* weather patterns
* weather hazards

Interpreting Weather Data

* forecasting process
* printed reports and forecasts
* graphic weather reports
* sources of weather information

Part IV – Performance and Navigation:

Airplane Performance

* predicting performance
* weight & balance
* flight computers

Navigation

* pilotage and dead reckoning
* VOR & ADF navigation
* advanced navigation

Part V – Integrating Pilot Knowledge and Skill

Applying Human Factors Principles

* aviation physiology
* aeronautical decision making

Flying Cross Country

* the flight planning process
* the flight