**FLGHT 115 Instrument Rating Flight Lab** (51005) Fall 2019

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**CLASS LOCATION:** Aero bldg, room 3 and at 4955 E. Anderson, Suite 117, Fresno CA 93727

**DAILY SCHEDULE:** F Aug. 16, 8:30–9:50 AM and as scheduled Aug. 15 - Dec. 13

Final Exam – As scheduled

**HOLIDAYS (NO CLASS):** Sep. 2 Labor Day

Nov. 11 Veterans Day

Nov, 28/29 Thanksgiving

**IMPORTANT DATES:** Aug 23 last day to drop for full refund

Aug 30 last day to add a class (Aug 23 for FLGHT courses)

Sep 2 last day to drop and not receive a “W” grade

Sep 11 last day to drop but will still receive a “W” grade

**REQUIRED TEXTBOOKS/EQUIPMENT:**

1. Uniform shirt(s)
2. Pencils, pens, paper, 8½ by 11 binder, simple calculator (add, subtract, multiply, divide)
3. Jeppesen Textbook ISBN 978-0-8847-130-9 printed 2016 (Instrument and Commercial) (Jeppesen part number 10001784-005)
4. Instrument Rating Practical Test Standards for Airplane, Helicopter, and Powered Lift (FAA-S-8081-4E with Changes 1, 2, 3, 4, & 5) (electronic version is acceptable)
5. FAR/AIM, current (recommend Jeppesen brand)
6. Instrument Flying Handbook (FAA-H-8083-15B) (plus errata sheet plus addendum) (electronic version is acceptable)
7. Instrument Procedures Handbook (FAA-H-8083-16B) (electronic version is acceptable)
8. Plotter
9. E6-B
10. PA-28 Warrior II POH (provided by Reedley College)
11. AC 00-6B Aviation Weather
12. AC 00-45H Weather Services (with change 1)
13. Aeronautical Chart User’s Guide (electronic version is acceptable)
14. Aeronautical Decision Making (AC 60-22) (electronic version is acceptable)
15. Unreliable Airspeed Indication (AC 91-43) (electronic version is acceptable)
16. Effect of Icing on Aircraft Control and Airplane Deice and Anti-Ice Systems (AC 91-51) (electronic version is acceptable)
17. Pilot Guide: Flight in Icing Conditions (AC 91-74) (electronic version is acceptable) Knee Board
18. IPad with cellular capability (but no paid cell phone plan) or WiFi only capability with an external GPS and ForeFlight "Pro Plus" ($199/year)

*Or*

Chart Supplement, U.S. SouthWest, valid

Instrument Approach Procedure Charts (Terminal Procedures) for California, valid

STARs – Standard Terminal Arrival Charts for California, valid

Departure Procedure Charts for California, valid

Low Altitude Instrument Charts for California, valid

1. Kneeboard
2. Pilot logbook
3. Reliable transportation to/from Fresno-Yosemite airport
4. Fresno-Yosemite airport ID badge (application on 1st day of semester - $75 cost)
5. Headset (see buying guide)
6. Aircraft fuel tester
7. Sunglasses (non-polarized)

Students are responsible for obtaining and maintaining current and updated materials.

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| **COURSE DESCRIPTION:** This laboratory course provides flight training for individuals seeking an Instrument Pilot Rating. Some of the topics covered will include principles of instrument flight, flight instruments, instrument navigation systems, IFR departure-en route-arrival procedures, analysis of weather information and conditions, IFR flight planning, and IFR emergency procedures. Students must hold a valid 3rd class (or higher) FAA medical certificate and a valid Fresno-Yosemite Airport ID Badge for the duration of this course. The cost of this course is substantial. See current published costs in the schedule of classes. 2 credits. |

**COREQUISITES:** FLGHT 111 and FLGHT 117

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| **COURSE CONTENT:** |
| **Student Learning Outcomes:** |
| *Upon completion of this course, students will be able to:* |
| 1. Demonstrate flight proficiency during instrument approach procedures.  2. Demonstrate requirements of air traffic control clearances.  3. Demonstrate understanding of instrument navigational aids. |
| **Objectives:** |
| *In the process of completing this course, students will:* |
| 1. Demonstrate instrument cross-country procedures.  2. Develop proficiency of flight under actual or simulated instrument conditions.  3. Demonstrate understanding of emergency procedures during instrument conditions. |

**Lab Content:**

1. Preflight Preparation
   1. Pilot Qualifications
   2. Weather Information
   3. Cross-Country Flight Planning
2. Preflight Procedures
   1. Aircraft Systems Related to IFR Operations
   2. Aircraft Flight Instruments and Navigation Equipment
   3. Instrument Cockpit Check
3. Air Traffic Control Clearances and Procedures
   1. Air Traffic Control Clearances
   2. Compliance with Departure, En Route, and Arrival Procedures and Clearances
   3. Holding Procedures
4. Flight by Reference to Instruments
5. Basic Instrument Flight Maneuvers
6. Recovery from Unusual Flight Attitudes
7. Navigation Systems
   1. Intercepting and Tracking Navigational Systems and DME Arcs
8. Instrument Approach Procedures
9. Nonprecision Approach (NPA)
10. Precision Approach (PA)
11. Missed Approach
12. Circling Approach
13. Landing from a Straight-in or Circling Approach
14. Emergency Operations
15. Loss of Communications
16. One Engine Inoperative During Straight-and-Level Flight and Turns (Multiengine Airplane Only)
17. One Engine Inoperative—Instrument Approach (Multiengine Airplane Only)
18. Loss of Primary Flight Instrument Indicators
19. Postflight Procedures

A. Checking Instruments and Equipment

**MINIMUM COURSE REQUIREMENTS:** In order to pass this course, ALL of the follow requirements must be met:

1. Pass on Stage Checks no later than the second attempt
2. Accomplish all required AATD simulation time of 20.0 hours
3. Accomplish all required flight time of 32.0 hours.
4. Pass the FAA Checkride (final exam) and earn the Instrument Rating
5. Earn an overall course score of 60% or higher

Not finishing all course requirements before the last day of scheduled classes or not within the course mandated flight time will earn the student a maximum grade of “F” even if all other course requirements are met. Incomplete grades are only issued when flight training is delayed for reasons outside the control of the student. Weather delays, maintenance delays, checkride scheduling, and illness are the typical reasons that cause an “Incomplete” grade. Students must remain available for completion of all flight training hours past the last day of scheduled classes to make up for delays.

**GRADING:** A “flight event” is a flight, an oral evaluation, a stage check oral exam, a stage check flight, a checkride oral, and a checkride flight. Each “flight event” will be graded.

Average of all flight events …………………………………………………..................................….25%

Last FAA Practical (Checkride *Flight*) or last Stage Check *Flight* (FLGHT 105 & FLGHT 125) ..75%

TOTAL …………………………………………………………………………………………..……....100%

Overall Course Grading Scale: 90.0 % and above = A

80.0 % and above = B

60.0 % and above = C

40.0 % and above = D

below 40.0% = F

i.e. 89.99% = B (Scores will not be rounded up)

The Stage Check(s) must be passed with a score of 5 (A) on the oral and also passed with a 5 (A) on the flight portion. The oral and flight portions must both be passed to completely pass a stage check. Each Stage Check(s) may be re-taken one time for a total of two attempts if there are remaining flight hours in this course. If the Stage Check is not completely passed by the second attempt, the score earned for the Stage Check will be 1 (F) and the student will earn no higher than an “F” grade for the course, regardless of the overall grades for the course.

The Federal Aviation Administration (FAA) Oral/Practical exam (“Checkride”), if required, may be re-taken one time for a total of two attempts if there are remaining flight hours in this course. If the Checkride is not passed by the second attempt, the score earned for the checkride will be 1 (F) and the student will earn no higher than an “F” for the course, regardless of the overall grades for the course. If the student is not endorsed by the flight instructor to take the FAA Oral/Practical or final Stage Check (in FLGHT 105 or FLGHT 125), the score used for that event will be a 1 (F grade).

If a student does not take or does not pass the FAA Practical exam (Flight) (or Final Stage Check *Flight* in FLGHT 105 OR FLGHT 125) for any reason, a score of 1 (F) on that event will be used to calculate the student’s grade.

If a student earns less than a “C” grade in this course (less than 60% overall), it will not count towards the AS degree in Flight Science and must be re-taken.

**CLASS EVENT SCHEDULE:** All flight events are individually scheduled. Students must use a day planner or other system to ensure they show up for all scheduled events. Students must be available on a nearly daily basis (Monday - Sunday) and through the last day of the semester. In order to ensure students finish the course by the last day of classes, flight events will be scheduled on the weekdays, on the weekends, and may be scheduled on national holidays and school breaks.

All students must have and use a cell phone. All flight event scheduling in person (verbally), by phone, or by the online scheduling system is considered official notification of flight events.

**FLIGHT EVENTS, GROUND EVENTS, and FLIGHT STAGE CHECK:**

Each flight event has an overall grade. The grade for each flight event is based on how well the student prepared for the event by showing up with assigned aeronautical knowledge ready to be demonstrated (describing maneuvers, emergency procedures, etc.) and on in-flight performance. .

The Stage Checks consist of approximately 2 hours of an oral exam and 1.5 hours of a flight exam. The FAA Checkride consists of approximately 3 hours of an oral exam and 1.5 hours of a flight exam.

If a student is not academically prepared for the oral portion of a flight stage check or checkride, the instructor may stop scheduling flights and only schedule 1-on-1 aeronautical knowledge evaluation in order to bring the student up to oral exam knowledge requirements.

All flight courses have a set oral knowledge and flight skill minimum proficiency and minimum Federal Aviation Administration (FAA) flight hours in order to become qualified to pass the course and/or be eligible to take the FAA Checkride. These minimums vary by flight course.

It is against federal law for a flight instructor to endorse a student for solo flight unless the flight instructor is confident the student will be safe. It is against federal law for an instructor to endorse a student for an FAA checkride unless the instructor is confident the student can pass both the oral and practical portions of the exam.

If a student attains the minimum proficiency and/or minimum FAA flight hours and passes the Stage checks and/or FAA checkride prior to using all flight time, the student shall use all flight time remaining in this course for learning purposes and flight experience requirements. All flight and instructor hours must be completed by the end of the last day of scheduled college classes for that term if safely possible. It is the student’s responsibility to have those remaining flight hours scheduled and flown. If an Incomplete grade is issued, the student must use all remaining aircraft and instructor time no later than the last day to complete the Incomplete grade.

It is a Federal TSA requirement to keep the airport entrance gate code confidential. Providing this code to anyone is prohibited. If a student forgets the code, they need to call their flight instructor to be re-issued the code.

**Maximum FAA allowable aircraft weight restrictions:**

a. There is a maximum FAA allowable weight of people and equipment that is safe and legal to fly in each airplane. Students weighing up to 250 lbs. will fly the IFR Aircraft (PA-38) in this course. Reedley College does not have aircraft that have a capacity for students over 250 lbs. See Student Handbook, Flight Science for more information.

Students must weigh-in at the beginning of each semester and may be required to weigh-in before any flight if close to 250 lbs. Students must stay below the maximum allowable weight limit or they will not be able to complete the flight lab course. Exceeding the maximum student weight after the last day to drop with a full refund is not a valid reason to request the refund of a flight lab fee.

Showing up over the max flying weight for any flight event is cause to cancel the event and classify it as an Unexcused absence. Events will be continued to be scheduled in an attempt to complete all events by the last day of the semester, regardless of student weight.

**ATTENDANCE:** This absence policy will be strictly adhered to.

Graded activity will occur every event.

Wanting to reschedule a flight event because of work, preparing for classes, leaving town, or any other circumstance within the control of the student and less than 48 hours prior to a scheduled event is not authorized and will result in an unexcused absence if the student does not show up prepared for the flight at the scheduled day/time. Except for circumstances outside the control of the student *and verified by hard copy documentation,* students will not be allowed to re-schedule a flight event less than 48 hours prior to the originally scheduled flight event. It is the student’s responsibility to check their own schedule in advance and confirm there are no conflicts.

It is the student’s responsibility to have their Non-Availability sheet revised for the instructor and for Scheduling whenever a temporary or permanent change of availability occurs.

Any student who asks to stop flying for 5 days or more at a time or more than 10 days total across the semester must provide their flight instructor an email or hard copy request for this time to stop flying. The student is required to inform the Flight Science Program Coordinator whenever their flying stops for more than 5 calendar days.

If a student is too ill to attend an event, the student must call the instructor’s phone and leave a message at least 30 minutes prior to the scheduled start of the event or it will be an unexcused absence.

The Flight Science Program Coordinator will determine if the absence is excused or unexcused. A student may appeal this decision in writing within 14 calendar days of the missed event to the Division C Dean.

Documented circumstances out of the student’s control will be considered for an excused absence. If a student knows in advance that they are going to miss an event or be absent for any length of time, submit an email or written request at least seven calendar days in advance to your assigned flight instructor with name, reason for absence, and a proposed make-up date/time. Provide appropriate documentation. Requests for absences for personal reasons will be taken under consideration and have the same seven day advance request requirements.

If an event is missed for a reason out of the control of the student, the student must call the instructor at least 30 minutes prior to the start of the event if possible, but preferably, as soon as it is apparent that an event will be missed. The student will then need to provide hard copy documentation proving the absence was outside of the student’s control.

If a student has no appropriate documentation that proves the circumstances were out of their control or the student fails to call the instructor 30 minutes prior to the event in case of an illness, it will be considered an unexcused absence. All unexcused absences will earn the student a zero (0) grade for that event.

If a student earns a third unexcused absence prior to the end of the ninth week of classes, that student will be administratively dropped from this course for excessive absences. After the ninth week, students will be charged the full amount of each flight event that was planned for all unexcused absences.

Students must show up for a flight event 15-30 minutes prior to the scheduled start time in order to preflight the aircraft, check weather, performance, and Weight & Balance. Showing up for a flight event more than 15 minutes after the scheduled start of a flight event is considered an unexcused absence and will generate an unexcused absence form.

If a student is scheduled for a flight and does not have a uniform shirt, headset, log book, completed flight log (for cross countries and checkrides), charts, or other required materials or equipment available in time for the flight, then the flight is cancelled and the flight event is considered an unexcused absence.

To count towards a Reedley College course, all college flight events must be taken from Reedley College. Similar to hiring a private tutor, students are not restricted or recommended by the College in taking non-college flight training. All FAA written tests and FAA Oral/Practical exams (checkride) must be scheduled by Reedley College.

Students must be available during daylight hours and some night hours to accomplish FAA required flight experience in each flight course. Each student must be available for 2-4 flight events per week per flight course. Each flight event lasts 2-4 hours. Each student, therefore, must be available to fly at the airport at least 20 hours per week, every week, while the semester is in session. Failing to be available for scheduled flight events will cause the student to earn an “F” grade for the course since flight events will be scheduled often enough to complete all flight events prior to the last day of classes of this semester.

If any required event has not yet been completed, the student must continue to attend class (flight event) through the last week of that term.

If a student does not finish an outstanding “Incomplete” (I) grade from an FLGHT class prior to the last day to add/drop in the next semester, the student will be administratively dropped from all FLGHT classes for which prerequisites have not yet been completed. Essentially, if an “I” grade is not finished by the last day to add/drop of the next term, the student will not fly that next term.

Do not schedule trips or airline flights that conflict with course dates. Do not make travel plans that start before the last day of FLGHT classes. Students must remain available for flight events after the last day of classes if there is a delay due to weather, illness, or checkride scheduling. Always check with your instructor prior to purchasing any airline flights, even when outside of scheduled college semesters.

Reedley College makes every effort to ensure all flight events in this syllabus are provided to each student. The student is responsible to inform Reedley College if the end of the term is approaching and any remaining flight hours have not been provided to the student.

**COURSE ACTIVITIES:** Flight lessons usually consist of a preflight briefing of 10-15 minutes, preflight review, a 1.0 to 1.3 hour helicopter flight, and a 10-15 minute post-flight briefing. All of this is usually provided by a student’s assigned flight instructor. The flight lessons are designed to train the student to pass the flight portion of the checkride.

1-on-1 aeronautical knowledge evaluation consists of aeronautical knowledge evaluation by a flight instructor. 1-on-1 aeronautical knowledge evaluation lessons are designed to confirm the student can pass the oral portion of the flight stage check(s) and/or checkride. It is not designed to be used as remedial instruction for material already covered in ground school.

It is the student’s responsibility to ask questions concerning any and all flight events.

Students are responsible for taking good notes, asking questions if anything is unclear, getting assignments done on time, requesting help if performance in this class is less than what they would expect, deciding on the amount of time and effort spent towards this course, and on study methods used for the flight events and the stage check(s) and checkride (if any).

**1-ON-1 AERONAUTICAL KNOWLEDGE EVALUATION EVENTS:** There is an aeronautical knowledge assignment for each 1-on-1 aeronautical knowledge evaluation events. These assignments are correlated with the instructional videos, study questions, and POH questions. The student is expected to show up for these events having studied and prepared to be evaluated on aeronautical knowledge.

**PREPARING FOR ORAL EXAMS:** Re-watching the video lectures, reviewing the practice questions, and reviewing the POH Limitations are the best methods of reinforcing the knowledge needed to pass the oral portion of the Stage Checks and the FAA Checkride.

To earn an average grade, you can expect to spend two to four hours at home studying and preparing for each flight or ground event. There are approximately 40 flight and ground events in each flight course. The associated study and preparation for these events is therefore 80-160 hours. This total is based on an average student earning an average grade. Some students may need to spend considerably more time outside of class in order to pass this course.

**STUDENT CONDUCT STANDARDS:** Respect for the rights of others and for the College and its property are fundamental expectations for every student.  The “Student Conduct Standards” outlines behavioral expectations, and explains the process for responding to allegations of student misconduct. Students who do not comply with the “Student Conduct Standards” are subject to the College disciplinary actions. The Student Conduct Standards can be found at [**https://www.reedleycollege.edu/about/about-us/policies-and-procedures/student%20conduct%20standards.html**](https://www.reedleycollege.edu/about/about-us/policies-and-procedures/student%20conduct%20standards.html)

**BEHAVIOR:** Any behavior which disrupts other student learning will not be tolerated. Here are some examples of inappropriate in-class behavior:

1. Eating of any kind in class or lab. Covered drinks are allowed in classrooms and in the designated area in lab only. No drinks of any kind are ever allowed in any computer lab.

2. Using foul language

3. Total of student voices being louder than the instructor

4. Cell phones ringing or texting during class

5. Horseplay

6. Discriminatory or harassing remarks based on gender, age, national origin, race, or

religion, or disability.

**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.

**DOING WELL IN THIS COURSE:** To learn the most from this course, the instructor suggests the following techniques:

1) Maintain punctual and perfect attendance.

2) Show up prepared (having read text, accomplish homework assignments, studied for tests/final exam, and brought equipment (homework, notepaper, lecture notes, pencils, pens, erasers) to class.

3) Study alone plus participate in a study group three times per week (every week) to do practice questioning for each test/exam.

4) Read and follow all verbal & written (syllabus, exams, homework, project) instructions.

5) Use a day planner and refer to schedule of class activities.

6) Get a good night’s sleep, eat healthy, exercise, and stay hydrated.

7) Ask the instructor for additional help.

**PROBLEMS:** Personal problems that affect your academic performance must be brought to the attention of the instructor immediately. *Problems must be worked out in advance*. Doing poorly on a graded activity or not showing up for a graded activity cannot be fixed “after the fact.”

**CELL PHONE, TABLETS, LAPTOPS:** No use of Personal Electronic Devices (PED) (such as cell phones, tablets) in class (laptops/tablets may be used to take notes in class) or in lab without prior instructor permission.

**STUDENTS WITH DISABILITIES/SPECIAL ACCOMMODATIONS:** 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.

**GRIEVANCE PROCEDURE:** Every effort is made to treat all students the same. If you feel you have been treated unfairly, please inform the instructor immediately so appropriate corrections can be made. If you have a problem with the instructor or the way this course is conducted, please talk to the instructor immediately.

I certify that I have read and understand the syllabus for FLGHT 115.

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Printed name of student signature date