14 CFR 141 PILOT SCHOOL

PRIVATE PILOT AIRPLANE SINGLE-ENGINE LAND TRAINING COURSE OUTLINE

October 15, 2008,
Revision 1, October 1, 2010
Revision 2, December 22, 2010
Revision 3, October 19, 2012
Revision 4, May 7, 2014
Revision 5, June 5, 2017
Revision 6, June 30, 2021
Revision 7, June 14, 2023

LIST OF EFFECTIVE PAGES

PRIVATE PILOT AIRPLANE SINGLE-ENGINE LAND TRAINING COURSE OUTLINE

Changes are highlighted with a vertical border.

Pages	Revision
1-122	7

FAA APPROVED
BTR FSDO SW-03
JOHN O SHAMBLIN
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Future revisions may be posted by pen-and-ink in the space provided.

DATE	REVISION #	PAGES AFFECTED

Summary of changes

Revision 7, June 14, 2023

Removed revision date from footer of document. It is clearly stated on the cover, and all pages are considered to be of the present revision.

TABLE OF CONTENTS. Added reference to FAA LOAs.

Ground syllabus. Replaced all references to "computer knowledge test" with "airman knowledge test." Deleted reference to embossed seals being present on knowledge test reports.

GROUND STAGE 2, LESSON 4 and LESSON 5. Adjusted references on lesson pages to align with Jeppesen textbook Chapters 9B and 9C. Deleted reference to LORAN.

Flight syllabus. Added 5.0 flight hours and four dual Units to the Pre-Solo portion (Stage 1) of the flight syllabus. Added 1.0 hour oral and 1.0-hour dual Units to Stage 2 for the express purpose of practical test preparation. Deleted an optional Stage 2 solo Unit. Total planned dual flight time is now 35.0 hours.

Revision 6, June 30, 2021

Entire document. Altered each reference to "cockpit procedures training" or "CPT" to read "aviation training device" or "ATD" as applicable.

TRAINING FACILITIES AND LOCATIONS, Training Devices. Removed Frasca Level 6 Cessna flight training device (FTD) as an approved training device. Added Frasca International, Inc. Model Reconfigurable Training Device (RTD) (Cessna 172 G1000 NXi) as an approved training device.

GROUND STAGE 1, LESSON 2, CONTENT. Added Item 3d, Integrated Flight Displays to reflect the modern textbook.

Revision 5, June 5, 2017.

All pages renumbered. Deleted references to previous revisions. Multiple instances of Practical Test Standards/"PTS" were changed to Airman Certification Standards/"ACS".

P. 9, COURSEWARE AND REFERENCES. Deleted alphabetical suffixes from FAA publication series numbers. Added GARMIN *G1000 Pilot's Guide*.

P. 10, PRIVATE PILOT COURSE PLANNED TRAINING TIMES. Increased pre- and post-solo dual instruction time to 13.5 and 15.5 hours, respectively. Reduced total solo time to 6.0 hours. (These two in combination yield a new flight time total of 35.0 hours.) Replaced "FTD" with "CPT" (cockpit procedures trainer). All references beyond this point to "FTD" also were changed to "CPT". Reduced oral times associated with CPTs to 0.2 hours.

P. 10, COURSE COMPLETION STANDARDS. Revised to reflect ACS.

P. 11, TRAINING FACILITIES AND LOCATIONS. Added Frasca Mentor 172 G1000 Advanced Aviation Training Device (AATD) as an approved training device. Deleted Fidelity MOTUS AATD.

P. 47, deleted reference to practice tests and test prep software.

P. 49, revised expected brief/de-brief times (Oral) times.

P. 52, STAGE ONE FLIGHT TRAINING SUMMARY. Revised to reflect above-mentioned totals.

P. 53 STAGE TWO FLIGHT TRAINING SUMMARY. Revised to reflect above-mentioned totals.

P. 58, FLIGHT STAGE 1, LESSON 1. Added requirement to discuss avionics. Added recommendation to fly the initial sortie to a nearby airport, away from Ruston Regional.

P. 73, FLIGHT STAGE 1, LESSON 6. Increased from three to five units and unit durations increased to 1.4 hours.

P. 80, FLIGHT STAGE 1, LESSON 8. Deleted requirement for student to accomplish a second supervised pattern solo (after the initial one). (Also deleted mention of the second pattern solo in the Stage description on P. 56.)

P. 95, FLIGHT STAGE 2, LESSON 3. Deleted reference to DF steer.

P. 105, FLIGHT STAGE 2, LESSON 5. Added one dual review flight unit and increased durations to 1.5 hours. Made 1.0-hour solo proficiency flight unit optional.

<u>Revision 4, May 7, 2014.</u>

Deleted "FLIGHT OPERATIONS" from cover page. Revised and moved the List of Effective Pages (LEP). Deleted Assistant Chief Instructor for the course. Added the requirement to practice/brief emergency descent and crosswind landing as Special Syllabus items in the Emergency Procedures FTD lesson (Stage 1, Lesson 5) and the pre-solo review (Stage 1, Lesson 6, which superseded Revision 2). Incorporated Revision 3 and revised drawing to reflect "AATD".

<u>Revision 3, October 19, 2012:</u>

Added Advanced Aviation Training Device (AATD)—Fidelity MOTUS, as available for use if the Frasca FTD is unavailable.

Revision 2, December 22, 2010:

At POI recommendation, added spin recovery as a special syllabus requirement on Flight Stage 1, Lesson 6.

Revision 1, October 1, 2010.

The document was substantially revised on 10/1/10. All pages were renumbered; 39 pages were added; multiple typographical and formatting errors were corrected; front matter (Preface, Training Facilities pages, Table of Contents, etc.) was rewritten and rearranged. Drawings were revised; Ground Training Course Outline became Ground Training Syllabus, but was largely unchanged for content. References were moved to the front matter; Flight Training Course Outline became Flight Training Syllabus. Grading procedures were changed—maneuvers and daily overall grades changed to Unsatisfactory-Fair-Good-Excellent scheme, vice the former A-B-C-F. Only stage checks are now graded A-B-C-F; flight lessons were divided into units.

The method of directing Lesson and Unit contents were revised to be line items or "Special Syllabus" requirements. To indicate which line items are considered required, the convention was adopted of marking them on the Unit page with a '+'.

Stage One flight training time was upped to 10.0 hours, versus the previous 7.0. Initial area solo was taken from Stage Two and added to Stage One. Pre-solo oral times were adjusted from 0.5 to 1.0 per sortie. Emergency procedures training was moved closer to the end of Stage One.

Stage Two dual cross-country time was increased 2.0 hours, with solo cross-country reduced 2.0 hours. Syllabus total flight training time (including FTD) is now 35.5 hours.

Simulated instrument time required was added to flight training hour summaries.

PREFACE

Standardization of pilot training within the Louisiana Tech University Department of Professional Aviation is achieved by the use of the Private, Instrument, and Commercial Training Course Outlines (TCOs). This TCO outlines the training required by 14 CFR 141 to achieve the proficiency specified in the FAA Airman Certification Standards (ACS). It prescribes the course content, instructions to conduct the training, and the approximate time necessary to successfully complete all requirements. Each Louisiana Tech University TCO is divided into a Ground Training Syllabus and Flight Training Syllabus. Ground training lesson times will be divided as appropriate to fit a normal college class schedule. Flight times indicated in the Flight Training Syllabus are planned times. Individual lesson times may be reduced or increased. Cross-country times will be, at minimum, those specified in 14 CFR 141. The final totals (dual and solo) will be no lower than those listed in the applicable Appendix to 14 CFR 141, as follows:

Private Pilot: 35 hours ground instruction, three hours cross-country, 35 hours total flight time, 20 hours dual, five hours solo, three hours night, three hours instrument, three hours in the 60 days preceding a practical test.

Instrument Rating: 30 hours ground instruction, 35 instrument flight training.

Commercial Pilot: 35 hours ground instruction, four hours cross-country, 120 hours total flight time, 55 hours dual, 10 hours solo, five hours night VFR, 10 hours complex or technically advanced airplane, 10 hours instrument, three hours in the 60 days preceding a practical test.

Students enrolled in Louisiana Tech Professional Aviation flight courses will be provided a copy of the TCO appropriate to their course. Instructors are required to use the TCO as a guide for ground and flight instruction. This assures that all required items are covered and that the training program has continuity based upon a building block approach. The Chief Instructor ensures that the TCOs are relevant, current, and comply with the Federal Aviation Administration requirements.

The TCOs are augmented by *FLIGHT OPERATIONS SAFETY PROCEDURES AND PRACTICES, POLICIES, AND STANDARD OPERATING PROCEDURES*, which is published as a separate document.

This Training Course Outline (TCO) is published solely for the use of The Department of Professional Aviation, Louisiana Tech University. The Department of Professional Aviation is owned and operated in the name of:

Louisiana Tech University, Department of Professional Aviation
P.O. Box 3181, Ruston, Louisiana 71272

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TABLE OF CONTENTS

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PRIVATE PILOT—AIRPLANE TRAINING COURSE OUTLINE

COURSE OBJECTIVES

The student will obtain the aeronautical knowledge, skill, and experience to meet the requirements for a Private Pilot Certificate, Airplane Single-engine Land (ASEL).

COURSEWARE AND REFERENCES

Guided Flight Discovery Private Pilot Manual, Jeppesen Sanderson, Inc., current edition
FAA Private Pilot Airman Certification Standards
AC 00-6 Aviation Weather
AC 00-45 Aviation Weather Services
AC 60-22 Aeronautical Decision Making
AC 61-65 Certification: Pilots and Flight Instructors
AC 61-67 Stall and Spin Awareness Training
AC 61-84 Role of Preflight Preparation
AC 90-48 Pilots' Role in Collision Avoidance
AC 90-66 Recommended Standard Traffic Patterns and Practices for Aeronautical Operations at Airports Without Operating Control Towers
AC 120-51 Crew Resource Management Training
FAA-H-8083-1 Aircraft Weight and Balance Handbook
FAA-H-8083-3 Airplane Flying Handbook
FAA-H-8083-25 Pilot's Handbook of Aeronautical Knowledge
FAA-H-8083-27 Student Pilot Guide
Federal Aviation Regulations/Aeronautical Information Manual
Notices to Airmen
Louisiana Tech University Department of Professional Aviation Flight Operations Safety Procedures and Practices, Policies, and Standard Operating Procedures
Cessna 172 Pilot's Operating Handbook and Airplane Flight Manual
GARMIN *G1000 Pilot's Guide*
Applicable Navigation Charts and Airport/Facility Directory

PRIVATE PILOT COURSE PLANNED TRAINING TIMES

TRAINING STAGE	GROUND	DU	SO	ATD	ORL	INST	XC
GROUND STAGE ONE	35.0						
GROUND STAGE TWO	35.0						
FLIGHT STAGE ONE		18.5	1.5	4.0	19.8	1.8	
FLIGHT STAGE TWO		16.5	6.0	1.0	15.2	1.2	10.5
TOTALS	**70.0**	**35.0**	**7.5**	**5.0**	**35.0**	**3.0**	**10.5**

Key: GROUND: formal ground school (aeronautical knowledge); DU: dual instruction in aircraft; SO: solo in aircraft; ATD: Aviation Training Device (simulator); ORL: oral instruction associated with flight training; INST: instrument time; XC: cross-country.

COURSE COMPLETION STANDARDS

The student must demonstrate to suitable authority through written, oral, and flight tests that he or she possesses the aeronautical knowledge and skill consistent with the Private Pilot Airman Certification Standards (ASEL), as well as the ability to manage the risks of flight in order to act as pilot in command. Additionally, school records must reflect the experience requirements necessary are accomplished.

Louisiana Tech University
TRAINING FACILITIES

TRAINING FACILITIES AND LOCATIONS

1. Louisiana Tech University trains pilots at both its main campus in Ruston, LA, and at Louisiana Tech Flight Operations, Ruston Regional Airport. For a description of rooms (size and maximum number of students), refer to page 14-16.
2. Type training aids: Refer to page 13-16.
3. Aviation training devices (ATD):
    a. Frasca Mentor Cessna 172 advanced aviation training device (AATD) located in Davison Hall, Room 110.
    b. Frasca International, Inc. Model Reconfigurable Training Device (RTD) (Cessna 172 G1000 NXi) located in Davison Hall, Room 110.
4. Airports at which training flights originate: Ruston Regional Airport, which meets the requirements of 14 CFR 141.38.
    a. Description of facilities: Louisiana Tech Flight Operations is located at Ruston Regional Airport. The building contains suitable offices, a dispatch area, and numerous training rooms.
    b. Pilot briefing areas: Located in Louisiana Tech Flight Operations building and consist of planning area, cubicles, and a large class room.
5. Aircraft: Cessna 172R/172S airplanes will be used for all flight training in this course.
6. Minimum qualifications and ratings for each instructor assigned: FAA Ground Instructor Certificate or FAA Flight Instructor Certificate as applicable.
7. This course is listed in the Louisiana Tech University catalog as Private Pilot Ground I (PRAV 101), Private Pilot Ground II (PRAV 102), Private Pilot Flight I (PRAV 110), and Private Pilot Flight II (PRAV 111).
8. Chief Instructor for the course: James Zachry Staten.

TRAINING RECORDS:

Louisiana Tech University maintains flight training records in accordance with 14 CFR 141.101. Academic records are maintained per University policy.

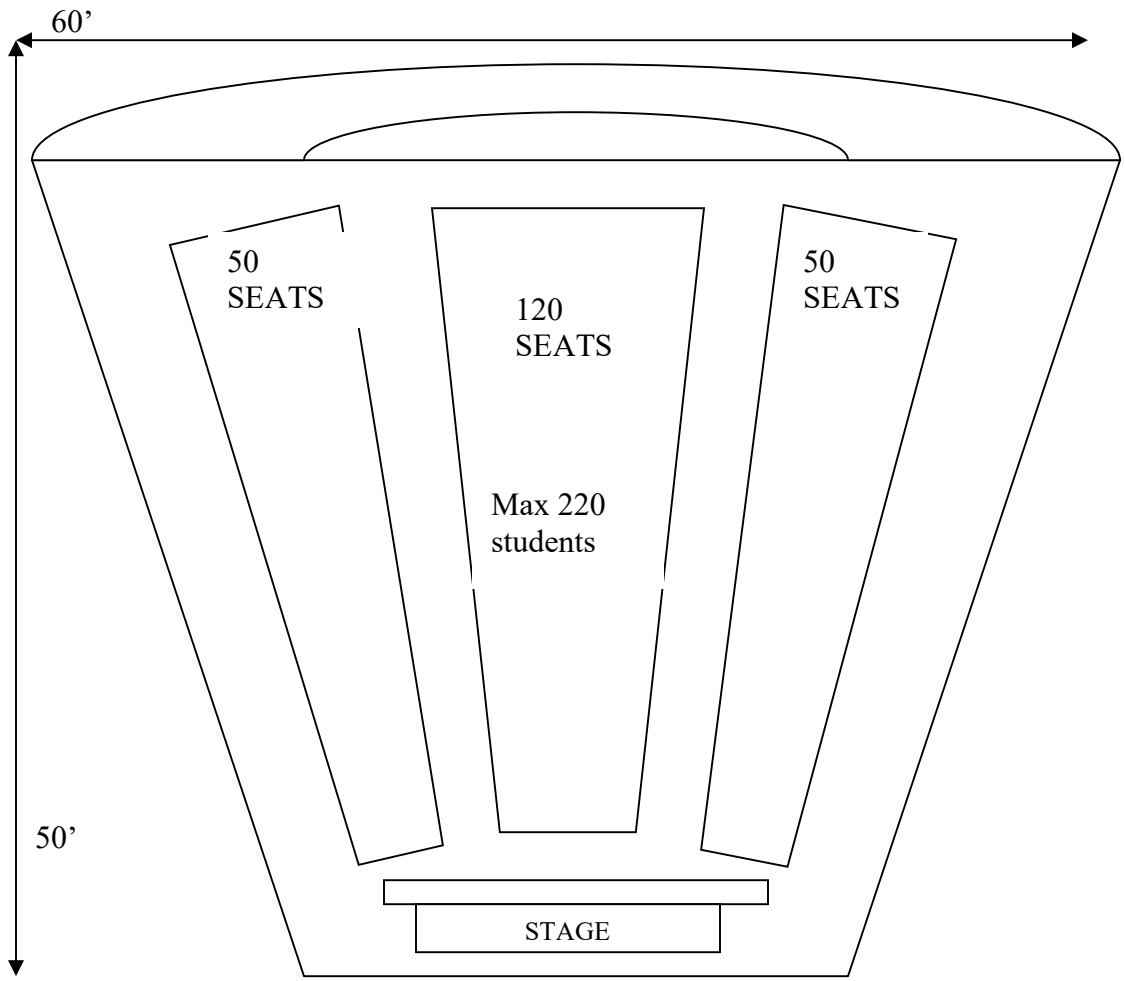
TALON: Talon-Systems' Education and Training Administration (ETA) and Resource Management System (RMS) are web-based programs that assist in training management and record keeping. Talon/ETA supports all facets of training operations including curriculum management, instructor currencies, student training records, student accounting, resource management, resource planning, and scheduling and operations. This TCO and ETA will mirror each other. ETA typically refers to individual lesson activities as "Units", so that convention is used in the flight syllabus portion of the TCO.

While printing gradesheets can be done from Talon/ETA, only completed stage checks will be printed. Daily flight training course lessons will be input and maintained online, in Talon. Upon request from the FAA or the student, a full set of paper daily training lesson gradesheets will be provided.

In the event of local Internet outage, instructors will print and use the applicable TCO page as a manual gradesheet (with subsequent input to Talon).

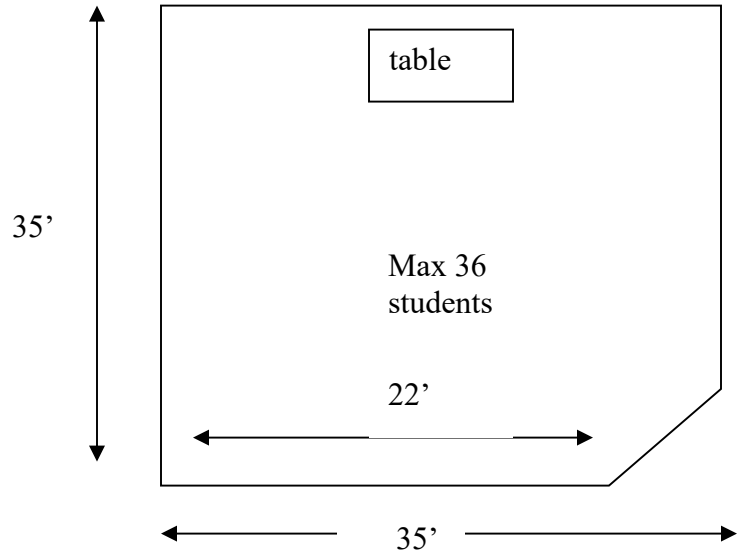
BUILDINGS/ROOMS

Main LTU Campus, Davison Hall, Room 113



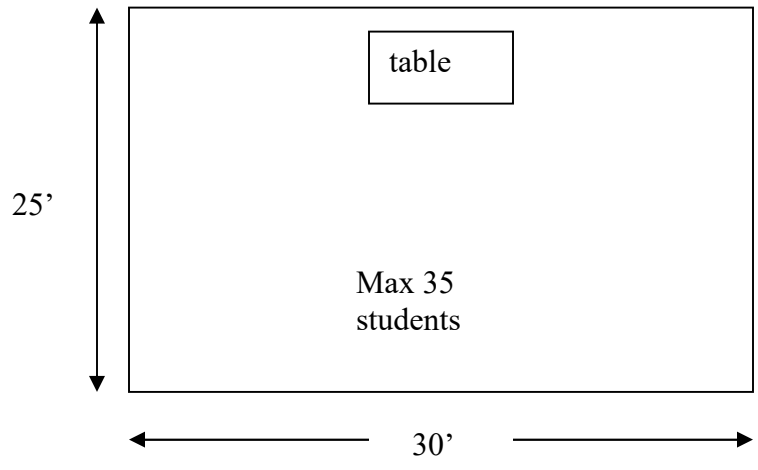
This room is used for safety meetings and other events of the Aviation Department. It is equipped with overhead projector, white board, computer, and TV/DVD/VCR player.

Main LTU Campus, Davison Hall, Room 310



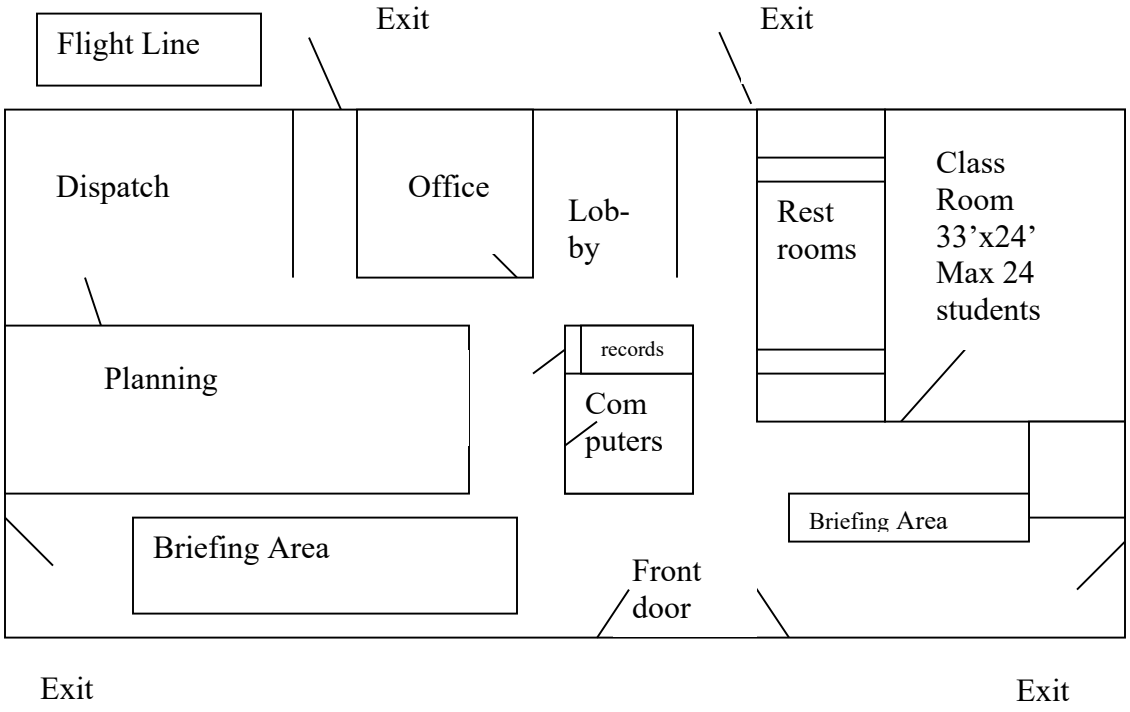
This room is used for larger classes and other events of the Aviation Department. It is equipped with blackboard, overhead projector, white board, computer, and TV/DVD/VCR player.

Main LTU Campus, Davison Hall, Room 305



This room is used for smaller classes and other events of the Aviation Department. It is equipped with blackboard and TV/DVD/VCR player.

Louisiana Tech University Flight Operations building, Ruston Regional Airport



INSTRUCTOR QUALIFICATIONS

CHIEF INSTRUCTOR:

1. Is responsible for all instructor, dispatcher, and student training.
2. Will have and maintain the qualifications identified in Part 141.35.
3. Will accomplish a flight instructor refresher course annually.
4. Will be qualified as a Check Instructor.
5. Will conduct stage checks, end-of-course tests, and instructor proficiency checks.
6. Will supervise all Assistant Chief Instructor(s), Check Instructors, Flight Instructors, Ground Instructors, and Dispatchers.
7. Is titled by the University as Director of Flight Education.

ASSISTANT CHIEF INSTRUCTOR(S):

1. Will have and maintain the qualifications identified in Part 141.36.
2. Will conduct stage checks, end-of-course tests, and instructor proficiency checks.
3. Will be qualified as a Check Instructor.
4. Will perform other duties as directed by the Chief Instructor.
5. Is empowered to sign or certify students' training records, graduation certificates, stage check/test reports, and course completions.

CHECK INSTRUCTORS:

1. Will conduct stage checks, end-of-course tests, and instructor proficiency checks.
2. Will have and maintain the qualifications identified in Part 141.37.
3. Will maintain all the qualifications of Flight Instructor.
4. Will perform other duties as directed by the Chief Instructor.

FLIGHT INSTRUCTORS:

1. Take initial and recurrent proficiency checks with the Chief Instructor or Assistant
2. Will be FAA-certificated flight instructors.
3. Will maintain a current Airman Medical Certificate.
4. Will conduct student flight training as authorized.
5. Will perform other duties as directed by the Chief Instructor.

GROUND INSTRUCTORS:

1. Will maintain the qualifications identified in Part 141.33 (personnel) and 141.81 (ground instructor).

DISPATCHERS:

1. Will hold a private pilot certificate.
2. Will be trained by the Chief Instructor or his Assistant in accordance with Part 141.33.

GROUND TRAINING SYLLABUS
COURSE REQUIREMENTS AND OBJECTIVES

ENROLLMENT PREREQUISITES: Students enrolling in the Private Pilot ground course must enroll as students at Louisiana Tech University.

GROUND TRAINING COURSE OBJECTIVE: The student will develop aeronautical knowledge in the areas specified by 14 CFR 141, Appendix B. Graduates of the ground course should have a sound acquaintance with the principles of flight, the flight environment, meteorology, aircraft performance, and planning and navigation.

GROUND TRAINING COURSE COMPLETION STANDARDS: The ground training course will be complete when the student demonstrates aeronautical knowledge that meets or exceeds those standards outlined in the Private Pilot Airman Certification Standards and passes the FAA Knowledge Test.

GROUND TRAINING CURRICULUM: Ground school for the Private Pilot student consists of two Professional Aviation (PRAV) courses at Louisiana Tech University. Stage One correlates to Private Pilot Ground I (PRAV 101) and Stage Two correlates to Private Pilot Ground II (PRAV 102). PRAV 101 and PRAV 102 each require 35 classroom hours. Completion of these courses will result in 70 class hours and six college credit hours. An outline for each lesson is provided below.

GROUND TRAINING TEXTBOOK: The ground-training course is structured by the *Guided Flight Discovery* Private Pilot Manual, Jeppesen Sanderson, Inc. Ground training lessons generally follow the sequence and content of this textbook. Other reference materials may be deemed required by the instructor.

GROUND TRAINING COURSE COMPLETION STANDARDS: The ground training course will be complete when the student demonstrates aeronautical knowledge that meets or exceeds those standards outlined in the Private Pilot Rating Airman Certification Standards (ACS) and passes the FAA Private Pilot Rating Knowledge Test.

GROUND STAGE ONE TRAINING SUMMARY

LESSON	HOURS
1 DISCOVERING AVIATION	2
2 AIRPLANE SYSTEMS	3
3 AERODYNAMIC PRINCIPLES	3
4 EXAMINATION 1	1
5 THE FLIGHT ENVIRONMENT PART 1	3
6 THE FLIGHT ENVIRONMENT PART 2	3
7 COMMUNICATION AND FLIGHT INFORMATION	3
8 EXAMINATION 2	1
9 METEROLOGY FOR PILOTS PART 1	3
10 METEROLOGY FOR PILOTS PART 2	3
11 INTERPRETING WEATHER DATA PART 1	3
12 INTERPRETING WEATHER DATA PART 2	3
13 EXAMINATION 3	1
14 STAGE ONE REVIEW	1
15 STAGE ONE FINAL TEST	2
TOTAL HOURS PRAV 101/GROUND STAGE ONE	**35**

GROUND STAGE TWO TRAINING SUMMARY

LESSON	HOURS
1 AIRPLANE PERFORMANCE PART 1	4
2 AIRPLANE PERFORMANCE PART 2	4
3 AIRPLANE PERFORMANCE PART 3	3
4 NAVIGATION PART 1	4
5 NAVIGATION PART 2	3
6 EXAMINATION 1	1
7 APPLYING HUMAN FACTORS PRINCIPLES	4
8 FLYING CROSS COUNTRY	4
9 EXAMINATION 2	1
10 COMPREHENSIVE REVIEW	4
11 FINAL PRIVATE PILOT EXAMINATION	3
TOTAL HOURS PRAV 102/GROUND STAGE TWO	**35**

PROFESSIONAL AVIATION 101
PRIVATE PILOT GROUND I: STAGE ONE GROUND TRAINING

OBJECTIVES: The primary concentration during Stage One is on the fundamentals of flight, flight operations, and aviation weather. Instruction will cover basic aerodynamics, engine operation, and flight instruments. This stage also covers the flight environment to including airport operations, VFR communications, airspace rules for VFR pilots, basic aviation meteorology, aviation weather services, and flight publications.

STAGE COMPLETION STANDARDS: The student will have the knowledge required at the Private Pilot level of basic aerodynamics, engine operation, the operation and displays of flight instruments, airports and airspace, and meteorology. Generally, numbered lessons are considered complete and the desired learning outcome achieved upon the student's passing the associated examination.

GROUND STAGE 1, LESSON 1: (2 HOURS) DISCOVERING AVIATION

OBJECTIVES: To introduce the student to the aviation industry and to explain the requirements to become a certificated Private Pilot.

CONTENT:

1. Pilot Training
    a. What is Flying All About?
    b. The Training Process
2. Aviation Opportunities
    a. Refresher Training
    b. Airplane Transitions
    c. Additional Pilot Ratings
    d. Aviation Careers
3. Introduction to Human Factors
    a. Aeronautical Decision Making
    b. Aviation Physiology
4. Federal Regulations
    a. Private Pilot
        i. limitations
        ii. flight operations
5. National Transportation Safety Board (NTSB)

COMPLETION STANDARDS: This lesson is complete when, by oral or written examination, the student displays a fundamental understanding of the aviation industry, the pilot training process, and the requirements necessary to become a safe and responsible certificated Private Pilot.

GROUND STAGE 1, LESSON 2: (3 HOURS) AIRPLANE SYSTEMS

OBJECTIVES: The objective is to explain the parts of an airplane and the principles of operation and the components of aircraft engines, propellers, and flight instruments.

CONTENT:

1. Parts of an Airplane
    a. The Fuselage
    b. The Wing
    c. The Empennage
    d. Trim Devices
    e. Landing Gear
    f. The Powerplant
    g. Pilot's Operating Handbook
2. The Powerplant and Related Systems
    a. Engines
    b. Propellers
    c. Electrical Systems
3. Flight Instruments
    a. Pitot-Static Instruments
    b. Gyroscopic Instruments
    c. Magnetic Compass
    d. Integrated Flight Displays

COMPLETION STANDARDS: This lesson is complete when, by oral or written examination; the student displays a fundamental understanding of the parts of an airplane, the powerplant and related systems, and the flight instruments.

GROUND STAGE 1, LESSON 3: (3 HOURS) AERODYNAMIC PRINCIPLES

OBJECTIVES: The objective is to familiarize the student with basic aerodynamics.

CONTENT:

1. Four Forces of Flight
    a. Lift
    b. Weight
    c. Thrust
    d. Drag
2. Stability
    a. The Three Axes of Flight
    b. Longitudinal Stability
    c. Lateral Stability
    d. Directional Stability
    e. Interaction of Lateral and Directional Stability
    f. Stalls
    g. Spins (Entry and Recovery)
3. Aerodynamics of Maneuvering Flight
    a. Climbing Flight
    b. Left-Turning Tendencies
    c. Descending Flight
    d. Turning Flight
    e. Load Factor

COMPLETION STANDARDS: This lesson is complete when, by oral or written examination; the student demonstrates a fundamental understanding of basic aerodynamics.

GROUND STAGE 1, LESSON 4: (1 HOUR) EXAMINATION 1

OBJECTIVES: This test complies with the University requirement to provide the students with an evaluation and notification of standing prior to the latest course drop date. The primary objective is to provide incentive and opportunity for the student to assimilate the information learned during the first three lessons.

REFERENCE: *Guided Flight Discovery* Private Pilot Manual, Chapters 1 through 3.

CONTENT: The examination shall consist of at least 30 multiple-choice FAA airman knowledge test questions, along with fill-in-the-blanks, true/false, and matching. The period after the examination will include time to review and evaluate the student's performance on this examination.

COMPLETION STANDARDS: Grading is based on the traditional scale where 90% to 100% equals an 'A', 80% to 89% equals a 'B', 70% to 79% equals a 'C', 60% to 69% equals a 'D', and below 60% is a failure. Students should successfully complete this lesson with a grade of 70% or higher on this examination. Students who do not achieve this score must be scheduled for additional instructions in the area(s) of deficiency identified by the examination.

GROUND STAGE 1, LESSON 5: (3 HOURS) THE FLIGHT ENVIRONMENT PART 1

OBJECTIVES: The objective is to acquaint the student with different types of airports and airport layouts. The student will also be introduced to safety of flight concepts.

CONTENT:

1. Safety of Flight
    a. Collision Avoidance
    b. Positive Exchange of Flight Controls
2. Airports
    a. Controlled and Uncontrolled Airports
    b. Runway Layout
    c. Traffic Pattern
    d. Airport Visual Aids
    e. Runway Incursion Avoidance
    f. Airport Lighting
    g. Wake Turbulence

COMPLETION STANDARDS: This lesson is complete when, by oral or written examination the student demonstrates the knowledge of the different types of airports and airport layouts and the concepts related to safety of flight.

GROUND STAGE 1, LESSON 6: (3 HOURS) THE FLIGHT ENVIRONMENT PART 2

OBJECTIVES: The objective is to introduce the different types and use of aeronautical charts and acquaint the student with the different types of airspace.

CONTENT:

1. Aeronautical Charts
    a. Latitude and Longitude
    b. Projections
    c. Sectional Charts
    d. World Aeronautical Charts
    e. Chart Symbology
2. Airspace
    a. Airspace Classifications
    b. Uncontrolled Airspace
    c. Controlled Airspace
    d. VFR Terminal Area Charts
    e. Special VFR
    f. Special Use Airspace
    g. Other Airspace Areas
    h. Emergency Air Traffic Rules
    i. ADIZ

COMPLETION STANDARDS: This lesson is complete when, by oral or written examination; the student demonstrates the knowledge of aeronautical charts and the types of airspace.

GROUND STAGE 1, LESSON 7: (3 HOURS) COMMUNICATION AND FLIGHT INFORMATION

OBJECTIVES: The objective is to familiarize the student with radio procedures and the radar and ATC services and sources of flight information available to pilots.

CONTENT:

1. Radar and ATC Services
    a. Radar
    b. FAA Radar Systems
    c. VFR Radar Services
    d. Terminal Radar VFR Service
    e. Automatic Terminal Information Service
    f. Flight Service Stations
2. Radio Procedures
    a. VHF Communication Equipment
    b. Using the Radio
    c. Lost Communication Procedures
    d. Emergency Procedures
3. Sources of Flight Information
    a. Airport Facility Directory
    b. Federal Aviation Regulations
    c. Aeronautical Information Manual
    d. Notices to Airmen
    e. Advisory Circulars

COMPLETION STANDARDS: This lesson is complete when the student, by oral or written examination, shows that he or she demonstrates knowledge of radio procedures and the radar and ATC services and sources of flight information provided to pilots.

GROUND STAGE 1, LESSON 8: (1 HOUR) EXAMINATION 2

OBJECTIVES: The primary objective is to provide an incentive and opportunity for the student to assimilate the information learned during the preceding three lessons.

REFERENCE: *Guided Flight Discovery* Private Pilot Manual, Chapters 4 and 5.

CONTENT: The examination shall consist of at least 30 multiple-choice FAA airman knowledge test questions, along with fill-in-the-blanks, true/false, and matching. The period after the examination will include time to review and evaluate the student's performance on this examination.

COMPLETION STANDARDS: Grading is based on the traditional scale where 90% to 100% equals an 'A', 80% to 89% equals a 'B', 70% to 79% equals a 'C', 60% to 69% equals a 'D', and below 60% is a failure. Students should successfully complete this stage with a grade of 70% or higher on this examination. Students who do not achieve this score must be scheduled for additional instructions in the area(s) of deficiency identified by the examination.

GROUND STAGE 1, LESSON 9: (3 HOURS) METEOROLOGY FOR PILOTS PART 1

OBJECTIVES: The objective is to acquaint the student with the general characteristics of the atmosphere and the specifics of aviation weather relevant to the private pilot.

CONTENT:

1. Basic Weather Theory
    a. The Atmosphere
    b. Atmospheric Circulation
2. Weather Patterns
    a. Atmospheric Stability
    b. Moisture
    c. Clouds
    d. Precipitation
    e. Airmasses
    f. Fronts

COMPLETION STANDARDS: This lesson is complete when, by oral or written examination; the student demonstrates an appropriate understanding of the atmosphere and basic meteorology.

GROUND STAGE 1, LESSON 10: (3 HOURS) METEROLOGY FOR PILOTS PART 2

OBJECTIVES: The objective is to acquaint the student with different weather hazards. The student will be able to evaluate the weather conditions and hazards necessary for planning a safe flight.

CONTENT:

1. Weather Hazards
    a. Thunderstorms
    b. Turbulence
    c. Wind Shear
    d. Icing
    e. Restrictions to Visibility
    f. Volcanic Ash

COMPLETION STANDARDS: This lesson is complete when, by oral or written examination, the student demonstrates an appropriate understanding of the weather hazards in flight and their impact on flying decisions.

GROUND STAGE 1, LESSON 11: (3 HOURS) INTERPRETING WEATHER DATA PART 1

OBJECTIVES: The objective is to familiarize the student with sources and types of aviation weather charts, forecasts, and reports. The student will be able to read, interpret, and evaluate weather data on the ground and in flight and be able to make competent "go/no-go" decisions based on available weather information.

CONTENT:

1. The Forecasting Process
    a. Forecasting Methods
    b. Compiling and Processing Weather Data
    c. Forecasting Accuracy and Limitations
2. Printed Reports and Forecasts
    a. Printed Weather Reports
    b. Printed Weather Forecasts
    c. Severe Weather Reports and Forecasts

COMPLETION STANDARDS: This lesson is complete when the student, by oral or written examination, shows that he or she can procure, interpret, and use aviation weather services. The student should have knowledge of elements related to weather information by analyzing weather reports and forecasts. He or she must be able to make competent "go/no-go" decisions based on available weather information.

GROUND STAGE 1, LESSON 12: (3 HOURS) INTERPRETING WEATHER DATA PART 2

OBJECTIVES: The objective is to further familiarize the student with sources and types of aviation weather charts and reports. The student will be introduced to sources of weather information including how to obtain a preflight and in-flight weather briefing. The student will be able to make competent "go/no-go" decisions based on available weather information.

CONTENT:

1. Graphic Weather Products
    a. Graphic Reports
    b. Graphic Forecasts
2. Sources of Weather Information
    a. Preflight Weather Sources
    b. In-flight Weather Sources

COMPLETION STANDARDS: This lesson is complete when the student, by oral or written examination, shows that he or she can procure, interpret, and use aviation weather services. The student should have knowledge of elements related to weather information by analyzing weather reports and forecasts. He or she must be able to make competent "go/no-go" decisions based on available weather information.

GROUND STAGE 1, LESSON 13 (1 HOUR): EXAMINATION 3

OBJECTIVES: The primary objective is to provide incentive and opportunity for the student to assimilate the information learned during the preceding four lessons.

REFERENCE: *Guided Flight Discovery* Private Pilot Manual, Chapters 6 and 7.

CONTENT: The examination shall consist of at least 30 multiple-choice FAA airman knowledge test questions, along with fill-in-the-blanks, true/false, and matching. The period after the examination will include time to review and evaluate the student's performance on this examination.

COMPLETION STANDARDS: Grading is based on the traditional scale where 90% to 100% equals an 'A', 80% to 89% equals a 'B', 70% to 79% equals a 'C', 60% to 69% equals a 'D', and below 60% is a failure. Students should successfully complete this stage with a grade of 70% or higher on this examination. Students who do not achieve this score must be scheduled for additional instructions in the area(s) of deficiency identified by the examination.

GROUND STAGE 1, LESSON 14: (2 HOURS) STAGE ONE REVIEW

OBJECTIVES: This lesson provides the student the opportunity to review all material covered in Stage I and to prepare for the course final examination.

CONTENT:

1. Review material covered in stage I
2. Methods of review
    a. Present a brief lecture review of each lesson
    b. Encourage student participation
    c. Discuss typical test questions for each lesson
    d. Discuss test-taking techniques

COMPLETION STANDARDS: The student will successfully complete this lesson when, in the opinion of the instructor, he or she appears ready to succeed on the course final examination.

GROUND STAGE 1, LESSON 15: (2 HOURS) STAGE ONE FINAL TEST

OBJECTIVES: The objective is to provide a reliable, valid, comprehensive, and objective assessment of the student's level of learning.

REFERENCE: *Guided Flight Discovery* Private Pilot Manual, Chapters 1 through 7.

CONTENT: This examination will cover the Stage One material. The examination shall, as a minimum, consist of at least 50 FAA airman knowledge test multiple-choice questions, along with fill-in-the-blanks, true/false, and matching.

COMPLETION STANDARDS: Grading is based on the traditional scale where 90% to 100% equals an 'A', 80% to 89% equals a 'B', 70% to 79% equals a 'C', 60% to 69% equals a 'D', and below 60% is a failure. Failure to achieve an overall grade of at least 70 percent ('C') will require that the student retake the course.

PROFESSIONAL AVIATION 102
PRIVATE PILOT GROUND II: STAGE TWO GROUND TRAINING

OBJECTIVES: This stage introduces the student to regulations that apply to private and student pilot operations, basic terminology and definitions. The student will be presented the basics of air navigation, and flight planning procedures and techniques. The objective is to introduce students to various techniques, aids, and factors pertaining to the execution of a safe cross-country flight. The student will also be instructed on the primary physiological aspects of flight as a means to recognize, avoid, and/or take appropriate countermeasures. Aviation safety will be emphasized, as well as some of the typical hazards encountered in VFR flight and how to recognize and avoid emergency situations. The student will be given the basic fundamentals for making quick, decisive, and mature decisions in normal flight as well as in emergency situations.

COMPLETION STANDARDS: Successful completion of this stage occurs when the student demonstrates knowledge on all of the information required for the Private Pilot Knowledge Test. Generally, numbered lessons are considered complete upon the student's passing the associated examination.

GROUND STAGE 2, LESSON 1: (4 HOURS) AIRPLANE PERFORMANCE PART 1

OBJECTIVES: The objective is to teach the student to evaluate aircraft performance by considering the effect of varying atmospheric and runway conditions. The student will be able to use pilot operating handbooks to determine takeoff distances, rates of climb, cruise performance, and landing distances under various runway and atmospheric conditions.

CONTENT:

1. Predicting Performance
    a. Aircraft Performance and Design
    b. Chart Presentations
    c. Factors Affecting Aircraft Performance
    d. (effects of density/pressure altitude)
    e. Takeoff and Landing Performance
    f. Climb Performance
    g. Cruise Performance

COMPLETION STANDARDS: This lesson is complete when, by oral or written examination, the student demonstrates the ability to accurately perform all performance calculations.

GROUND STAGE 2, LESSON 2: (4 HOURS) AIRPLANE PERFORMANCE PART 2

OBJECTIVES: The objective is to teach the student the hazards of improper airplane loading and the requirements for and the advantage of proper loading. The student will be able to use the weight and balance data found in pilot operating handbooks to compute and properly loan an airplane within the allowable limits for safe and efficient flight.

CONTENT:

1. Weight and Balance
    a. Importance of Weight
    b. Importance of Balance
    c. Weight and Balance Terms
    d. Principles of Weight and Balance
    e. Determining Total Weight and Center of Gravity
    f. Effects of Operating at High Total Weights
    g. Flight at Various CG Positions

COMPLETION STANDARDS: This lesson is complete when, by oral or written examination the student demonstrates the ability to accurately calculate airplane weight and balance using either the formula, tabular, or graphical method.

GROUND STAGE 2, LESSON 3: (3 HOURS) AIRPLANE PERFORMANCE PART 3

OBJECTIVES: The objective is to introduce the student to the different types and use of flight computers.

CONTENT:

1. Flight Computers
    a. Mechanical Flight Computers
    b. Electronic Flight Computers

COMPLETION STANDARDS: This lesson is complete when, by oral or written examination, the student demonstrates an appropriate understanding of the different types and use of flight computers.

GROUND STAGE 2, LESSON 4: (4 HOURS) NAVIGATION PART 1

OBJECTIVES: The objective is to teach the student the basic principles of navigation the application of pilotage, dead reckoning, and radio navigation. The student will also be introduced to the basic operating principles of the VOR and DME.

CONTENT:

1. Pilotage and Dead Reckoning
    a. Pilotage
    b. Dead Reckoning
    c. Flight Plan
2. VOR Navigation
    a. Ground Equipment
    b. Airborne Equipment
    c. Navigation Procedures
    d. Checking VOR Accuracy
    e. Horizontal Situation Indicator
    f. Distance Measuring Equipment
    g. ADF Navigation

COMPLETION STANDARDS: This lesson is complete when by oral or written examination, the student demonstrates an appropriate understanding of the principles of air navigation and the operating principles of the VOR, DME, and ADF.

GROUND STAGE 2, LESSON 5: (3 HOURS) NAVIGATION PART 2

OBJECTIVES: The objective is to introduce the student to the basic operating principles of the ADF and advanced navigation systems.

CONTENT:

1. Satellite Navigation
    a. Global Positioning System

COMPLETION STANDARDS: This lesson is complete when, by oral or written examination, the student demonstrates an appropriate understanding of the operating principles of satellite navigation systems.

GROUND STAGE 2, LESSON 6: (2 HOURS) EXAMINATION 1

OBJECTIVES: This test complies with the University requirement to provide the students with an evaluation and notification of standing prior to the latest course drop date. The primary objective is to provide incentive and opportunity for the student to assimilate the information learned during the first five lessons.

REFERENCE: *Guided Flight Discovery* Private Pilot Manual, Chapters 8-9.

CONTENT: The examination shall, as a minimum, consist of at least 30 FAA airman knowledge multiple-choice questions, along with fill-in-the-blanks, true/false, and matching. The period after the exam will include time to review and evaluate the student's performance on this examination.

COMPLETION STANDARDS: Grading is based on the traditional scale where 90% to 100% equals an "A", 80% to 89% equals a "B", 70% to 79% equals a "C", 60% to 69% equals a "D", and below 60% is a failure. Students should successfully complete this stage with a grade of 70% or higher on this examination. Students who do now achieve this score must be scheduled for additional instruction in the area(s) of deficiency identified by the examination.

GROUND STAGE 2, LESSON 7: (4 HOURS) APPLYING HUMAN FACTORS PRINCIPLES

OBJECTIVES: This lesson introduces the new aviation student to the basic concepts of aviation physiology and aeronautical decision-making.

CONTENT:

1. Aviation Physiology
    a. Vision in Flight
    b. Disorientation
    c. Respiration
    d. Hypoxia
    e. Hyperventilation
2. Aeronautical Decision Making
    a. Applying the Decision Making Process
    b. NTSB (Accidents and Incidents)
    c. Pilot-In-Command Responsibility
    d. Communication
    e. Resource Use
    f. Workload Management
    g. Situational Awareness
    h. The Application of Aeronautical Decision Making

COMPLETION STANDARDS: The student will demonstrate an awareness of the basic concepts of aviation physiology and decision-making. The student should recognize stress and have an awareness of some of the basic methods to manage stress and avoid risks.

GROUND STAGE 2, LESSON 8: (4 HOURS) FLYING CROSS-COUNTRY

OBJECTIVES: The objective is to show the student how to plan a cross-country flight from start to finish.

CONTENT:

1. The Flight Planning Process
    a. Flight Overview
    b. Developing the Route
    c. Preflight Weather Briefing
    d. Completing the Navigation Log
    e. Flight Plan
    f. Preflight Inspection
2. The Flight
    a. APA to PUB
    b. PUB to LHX
    c. LHX to APA
    d. LIC to APA
3. Alternate Planning
    a. Delays
    b. Destinations

COMPLETION STANDARDS: This lesson is complete when, by oral or written examination, the student demonstrates how to plan a cross-country flight from start to finish.

GROUND STAGE 2, LESSON 9: (2 HOURS) EXAMINATION 2

OBJECTIVES: The primary objective is to provide incentive and opportunity for the student to assimilate the information learned during the second half of the stage.

REFERENCE: *Guided Flight Discovery* Private Pilot Manual, Chapters 10-11.

CONTENT: The examination shall, as a minimum, consist of at least 30 FAA airman knowledge multiple-choice questions, along with fill-in-the-blanks, true/false, and matching. The period after the exam will include time to review and evaluate the student's performance on this examination.

COMPLETION STANDARDS: Grading is based on the traditional scale where 90% to 100% equals an "A", 80% to 89% equals a "B", 70% to 79% equals a "C", 60% to 69% equals a "D", and below 60% is a failure. Students should successfully complete this stage with a grade of 70% or higher on this examination. Students who do not achieve this score must be scheduled for additional instruction in the area(s) of deficiency identified by the examination.

GROUND STAGE 2, LESSON 10: (4 HOURS) COMPREHENSIVE REVIEW

OBJECTIVES: The objective of this lesson is to provide the student an opportunity to review all material covered in stage one and two and prepare for the course final examination.

CONTENT:

1. All material covered in stage one and two
2. Methods of review
    a. Seek voluntary questions from students on each lesson
    b. Present a brief lecture review of each lesson
    c. Offer students practice examinations on each lesson

COMPLETION STANDARDS: This lesson is complete when, in the opinion of the instructor, he or she has a reasonable chance of obtaining the required minimum score of 70% on the course final examination.

GROUND STAGE 2, LESSON 11: (3 HOURS) FINAL PRIVATE PILOT EXAMINATION—FAA KNOWLEDGE TEST

OBJECTIVES: The PRAV 102 final examination complies with FAA requirements for completion of the FAA Airman Knowledge Test.

CONTENT: This examination will cover the Ground Stages One and Two material using the FAA multiple-choice questions. There are at least 60 randomly selected questions covering all phases of the Private Pilot Ground Course Phase I and II.

COMPLETION STANDARDS: The student completes Stage Two/PRAV 102 when he or she passes the FAA Airman Knowledge Test with a minimum score of 70% corrected to 100%. Students who do not achieve this score must be scheduled for additional instruction and re-examination, or be re-enrolled in PRAV 102.

KNOWLEDGE TEST GUIDE: The Louisiana Tech Department of Professional Aviation has a faculty member to proctor the Federal Aviation Administration (FAA) airman knowledge testing.

ELIGIBILITY REQUIREMENTS: Applicants use their ground school course completion certificate to certify that they are competent to take the test.

KNOWLEDGE AREAS ON THE TESTS: The tests are comprehensive, as they must test an applicant's knowledge in many subject areas. All test questions are the objective, multiple-choice type, with three choices of answers; each question is answered by the selection of a single response. Each test question is independent of other questions; a correct response to one does not depend upon, or influence the correct response to another. The maximum time allowed for taking the Private Pilot knowledge examination is 2.5 hours.

When taking a test, keep the following points in mind:

1. Answer each question in accordance with the latest regulations and procedures.

2. Read each question carefully before looking at the possible answers. You should clearly understand the problem before attempting to solve it.

3. After formulating an answer, determine which choice most nearly corresponds with the answer. The answer chosen should completely resolve the problem.

4. From the answers given, it may appear that there is more than one possible answer. However, there is only one answer that is correct and complete. The other answers are incomplete, erroneous, or represent common misconceptions.

5. If a certain question is difficult for you, it is best to mark it for RECALL and proceed to the next question. After you answer the less difficult questions, return to those, which you marked for recall and answer them. The recall marking procedure will be explained

to you prior to starting test. Although the computer should alert you to unanswered questions, make sure every question has an answer recorded. This procedure will enable you to use the available time to maximum advantage.

6. When solving a calculation problem, select the answer nearest your solution. The problem has been checked with various types of calculators; therefore, if you have solved it correctly, your answer will be closer to the correct answer than any of the other choices,

TAKING A KNOWLEDGE TEST: The testing periods will be posted on the Department bulletin board. Note that an additional fee is charged, which must be paid by credit card.

ARRIVING FOR THE TEST: When you arrive for the test, you should have a flight computer, a pocket calculator, a plotter, and a **PENCIL (NO PENS PLEASE)**. If you plan to use an electronic flight computer, the test monitor must ask you to remove the batteries to ensure that no information is in memory. You will be given scratch paper and the test supplemental material. Listen carefully to the instructions that will be given you by the test monitor. When you have completed the test, check to ensure that you have answered **ALL** of the questions. Report to the monitor when complete. The monitor will score the test and give you a copy of the test results. This is an important document. DO NOT LOSE THE AIRMAN TEST REPORT, as you will need to present it to the endorsing instructor prior to taking the practical test. Loss of this report means that you will have to request a duplicate copy from the FAA in Oklahoma City.

CHEATING OR OTHER UNAUTHORIZED CONDUCT: The University must follow rigid testing procedures established by FAA. This includes test security. When entering the test area, you are permitted to take only scratch paper furnished by the test administrator and an authorized aviation computer, plotter, etc., approved for use in accordance with FAA Order 8080.6, Conduct of Airmen Knowledge Tests via the Computer Medium, and AC 60-11C, Aids Authorized for Use by Airman Written Test Applicants. The FAA has directed testing centers to stop a test any time a test administrator suspects a cheating incident has occurred. An FAA investigation will then follow. If the investigation determines that cheating or other unauthorized conduct has occurred, any airman certificate that you hold may be revoked, and you may not be allowed to take a retest for one year.

RE-TESTING PROCEDURES: If the score on the airman test report is 70 or above, the report is valid for 24 calendar months. You may elect to retake the test in anticipation of a better score. Prior to retaking the test, you must give your current airman test report to the Department Test Monitor. Remember, the score of the latest test you take will become the official test score.

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FLIGHT TRAINING SYLLABUS

REQUIREMENTS AND OBJECTIVES

FLIGHT TRAINING COURSE OBJECTIVE: The student will obtain the aeronautical knowledge, skill, and experience necessary to be awarded a Private Pilot Certificate, Airplane Single-Engine Land (ASEL). The intent of Louisiana Tech University flight training is to produce a pilot who displays basic airmanship, to include competence, precision, and judgment.

ENROLLMENT PREREQUISITES: Students enrolling in the Private Pilot flight course need an FAA Airman Medical Certificate and Student Pilot Certificate, and completion of or concurrent enrollment in Private Pilot ground school. Students must enroll as a student at Louisiana Tech University, and satisfy the requirements of 49 CFR 1552.

FLIGHT TRAINING CURRICULUM: Flight school for the Private Pilot student is divided into two stages. Each stage is a Professional Aviation course at Louisiana Tech University. Stage One correlates to PRAV 110 and Stage Two correlates to PRAV 111. Completion of these courses will result in two college semester credit hours. Students will accomplish all syllabus-directed training unless omission is approved by the Chief Instructor.

COURSE COMPLETION STANDARDS: Completion standards equate to "desired learning outcome(s)." The student must demonstrate through flight tests and school records that the aeronautical knowledge, skill, and experience requirements necessary to obtain a Private Pilot Certificate (ASEL) are attained.

BRIEFING/DEBRIEFING: A standard briefing and debriefing time of one hour (total) is assumed to be associated with each aircraft sortie prior to Stage 1, Lesson 6, and with each dual cross-country flight. A standard briefing and debriefing time of one-half hour (total, or as required) is assumed to be associated with each dual local sortie during and after Stage 1, Lesson 6. Two-tenths (0.2) of an hour are associated with aviation training device Units (ATDs). These times charged to the student as Oral, but is not listed on the lesson outline pages or unit gradesheets. If Oral is specifically listed with a given unit, the time is intended as one-on-one ground instruction, over and above normal brief/debrief time.

SYLLABUS LAYOUT: The syllabus is divided into two Stages. The flight syllabus differs from the ground syllabus. Each Stage is divided into Lessons, which are then subdivided into individual activities, referred to as Units. The units support the objectives and standards, which are listed on the lesson pages.

NOTE: Lessons are intended to be taught in the order presented. However, to provide flexibility, completion of Stage 1, Lesson 1 opts the student for all units in Lessons 2 through 5. Successful completion of the pre-solo stage check opts the student for all dual sorties in Stage 2.

SPECIAL SYLLABUS ITEMS: Discussion items or maneuvers that fall outside of the areas of operation listed on the gradesheet are called "Special Syllabus." Special Syllabus may be a flight maneuver or a briefing item. Refer to the lesson.

AREAS OF OPERATION / UNIT CONTENTS: Items listed on the gradesheets with a "+" are those items intended to be emphasized in a given unit. Items for which a standard must be met will appear on the gradesheet. If the "plus-items" of a unit are not covered (and not marked on the gradesheet), Talon/ETA will not allow lesson completion. (See "Incomplete" below.)

Situational awareness, basic aircraft control, and general knowledge. Airmanship is key to pilot competency, and will be graded on each sortie. Airmanship encompasses situational awareness and judgment. Likewise, instructors will continuously sample the student's general knowledge, which will also be graded. These will appear on every flight and FTD gradesheet. Basic aircraft control refers to general holding of altitude, airspeed, and heading.

AREAS OF OPERATION: The following areas of operation will be graded. Every item will appear on every Unit page in the flight syllabus. There are two methods of directing Unit contents: "special syllabus" and "plus-items". Special syllabus requirements will require reference to the TCO, and usually will be graded NG upon completion. Items which must be covered on a given unit will have a minimum grade and "+", e.g. U+, F+, G+. (Grading scales are defined above.) Plus-items must be graded "Fair" prior to solo. All items must be graded "Good" prior to course graduation. Items required will be reflected in Talon/ETA.

Preflight Preparation
Ground Operations
Normal Takeoff
Short-field Takeoff
Soft-field Takeoff
Departure
Steep Turns
Slow Flight
Power-off Stalls
Power-on Stalls
Ground Reference Maneuvers
Enroute Descent
Straight-In Approach
Traffic Pattern
Normal Landing
Short-field Landing
Soft-field Landing
Slip to Land / No-Flap Land
Night Operations
Engine-out Procedures
Engine-out Landing
Basic Instrument Maneuvers
Touch-and-Go
Go-Around
Communication
Pilotage/Dead Reckoning

Use of Navigation Systems
Diversion
Checklist Procedures
Risk Management / Decision Making
Task Management
Situational Awareness
Emergency Procedures
General Knowledge
Basic Aircraft Control
Special Syllabus Requirements

GRADING INSTRUCTIONAL LESSONS:

There are two methods of grading student performance: an absolute grading scale for rating individual maneuver items, and a relative grading scale for assessing overall sortie performance.

Absolute Grading Scale
Instructors judge the student's maneuver performance against the Airman Certification Standards. Grades are based on the student's characteristic performance. This grade does not consider the student's type and amount of training.

Maneuver Grades Description
No Grade (NG) Enter NG on the record of training when the maneuver is demonstrated by an instructor pilot on a dual sortie, but not performed by the student. NG is also used to indicate on the gradesheet that a Unit Contents / Special Syllabus briefing item was covered. Additionally, NG is the grade for individual maneuvers on solo sorties, unless the student does something recognizable from the ground as unsafe.
Unsatisfactory (U) The student is unsafe or unable because of lack of sufficient knowledge, skill, or ability to perform the operation, maneuver, or task. Note that 'U' may completely normal at a given point in training. For instance, maneuvers newly introduced will typically be Unsatisfactory. Post-solo students receiving a 'U' on any safety of flight item will receive a 'U' overall, and will not fly solo again until the 'U' is cleared.
Fair (F) The student performs the operation, maneuver, or task safely but has limited proficiency. Deviations occur that detract from performance and/or verbal prompting was required from the instructor. Typically, Fair indicates the CFI's belief that the student can or could safely accomplish the item while solo in the aircraft.
Good (G) The student performs the operation, maneuver, or task satisfactorily. Deviations occur that are recognized and corrected in a timely manner without verbal prompting from the instructor. Good equates to the ACS, and indicates sufficient mastery of the subject or maneuver.
Excellent (E) The student performs the operation, maneuver, or task correctly, efficiently, and skillfully. Minor deviations occur that do not detract from the overall performance.
Not Applicable (NA) Talon/ETA requires a grade on every item on its Unit gradesheet. A sortie may be complete, even though a particular non-plus-item was not accomplished. If this is the case, then that item is marked NA.

Overall Sortie Grades/Relative Grading Scale
The instructor applies relative grading criteria to assess overall sortie performance with grades of Excellent (E), Good (G), Fair (F), or Unsatisfactory (U). "Good" is the norm for daily sorties. There is never a requirement for a student to achieve, nor for an instructor to issue a grade of "Excellent". Students are expected to progress as they advance in training. Students may receive grades of 'F' or 'U' on individual maneuvers new to them, but still receive a grade of 'G' or 'E' for overall sortie performance. A student's continued lack of progress should be reflected with an overall sortie performance grade of Fair or Unsatisfactory. 'F' will not be given as overall grade on consecutive sorties. 'U' as an overall grade means the student does not demonstrate satisfactory proficiency or progression for his/her level of training. This may represent lack of preparation or effort on the student's part, lack of recency of experience, lack of skill, or simply a temporary learning plateau (student needs to repeat the unit.)

For flights preceding stage checks, 'U' overall represents the instructor's judgment that the student cannot pass the applicable stage check. Except for lessons immediately preceding stage checks, a sortie graded 'U' overall does not absolutely preclude progress to the subsequent syllabus sortie. However, remediation or additional training may be directed, if necessary. Additionally, 'U' is the overall grade assigned in the event of active airsickness. A student achieving three overall 'U' grades consecutively will be brought to the attention of the Chief Instructor, who will review the student's training record, and, if needed, direct a progress check lesson with a check instructor (ground and/or flight evaluation.)

Incomplete (I) 'I' is assigned as an overall sortie grade if, due to conditions beyond the student's control (weather, maintenance, illness, etc.), insufficient time was available for the student to meet standards in a particular maneuver. Amplifying information is required. If in doubt, CFI's will consult the Chief Instructor or Assistant Chief as to the appropriateness of an Incomplete versus an Unsatisfactory grade. Additionally, an 'I' is appropriate if time is insufficient for a given oral or flight lesson, but some training was accomplished.

Solo sorties: Solo sorties are graded NG overall, unless the student commits a patently unsafe act which is observable from the ground or by an airborne flight instructor, in which case the sortie would be graded 'U', and the student counseled.

STAGE CHECKS: Stage checks are integral to Part 141 pilot schools. They measure the student's accomplishment during each stage of training. They allow close supervision of training and a second opinion on the student's progress. Specific chief instructor approval is required to begin the next stage without completing the current stage, including its associated stage check. Students failing stage checks will not proceed to the next stage.

GRADING STAGE CHECKS: After each stage check, the check instructor will assign maneuver grades using the preceding scale (U-F-G-E). When any grade below a plus-item standard is assigned, the check instructor must include amplifying comments on the grade form. The "A-B-C-D-F" scale, used for the overall grade, is relative, with the check instructor using his judgment.

(A) Meets or Exceeds Standards without check instructor input. Each stage check begins with the assumption that the student is at the 'A' level.

(B) Meets Standards with little check instructor input.

(C) Below Standards. The student is not unsafe but proficiency is limited or excessive instruction is required. Check instructors require specific Chief Instructor permission to issue a 'C' overall. 'C' will not be used on Final stage checks, since all items must meet standards (Good).

(D) 'D' is not a usable stage check grade.

(F) Failure. Safety of flight is in question, and/or instructor intervention is required. Grading any line item 'Unsatisfactory' on a stage check results in an 'F' overall.

Students achieving an 'F' will normally be required to repeat the stage check. The check instructor will direct or conduct remediation as required. The flight profile of a repeated flight stage check will be full mission profile, except that navigation need not be repeated if it was satisfactory on the original attempt. The re-check will include all items graded below standard. Original failed maneuver grades are not accounted for in either the maneuver grades or the overall grade of the retake.

PRACTICAL TESTS: Practical tests are conducted by the FAA or their designated representative. Practical test completion is required to complete the training course.

COURSE GRADES: Flight course grades are issued by the Chief Instructor. Because this is a collegiate setting in which college credit is given for flight courses, the "A-B-C-D-F" grading system must be used. Normally, if a stage check is graded 'A' or 'B' on the first attempt, or a practical test is passed on the first attempt, an 'A' for the course is issued, unless special circumstances exist. 'B' would usually indicate a second attempt at the stage check or practical test was required for success. 'C' would indicate more than two attempts at the check or test were required. 'D' would be issued only in special, negative circumstances. 'F' would be issued for failure to complete the stage or certificate test, as applicable.

STAGE ONE FLIGHT TRAINING SUMMARY

Note: DU—dual, SO—solo, ATD—aviation training device, ORL—oral, INST—instrument

LESSON 1: BASICS	DU	SO	ATD	ORL	INST	XC
1. FLIGHT OPERATIONS ORIENTATION				4.0		
2. INTRO. TO THE TRAINING AIRCRAFT			1.0	0.2		
3. INTRO. TO THE TRAINING AIRCRAFT	1.2			1.0		
LESSON 2: AIRWORK						
1. PRIVATE PILOT MANEUVERS				1.0		
2. PRIVATE PILOT MANEUVERS	1.2			1.0	0.2	
LESSON 3: GROUND REFERENCE MANEUVERS						
1. GROUND REFERENCE MANEUVERS				1.0		
2. GROUND REFERENCE MANEUVERS	1.2			1.0		
LESSON 4: AIRPORT OPERATIONS						
1. ARPT OPS, TAKEOFFS, LANDINGS				1.0		
2. ARPT OPS, TAKEOFFS, LANDINGS			1.0	0.2		
3. ARPT OPS, TAKEOFFS, LANDINGS	1.2			1.0		
LESSON 5: EMERGENCIES						
1. EMERGENCY PROCEDURES				1.0		
2. EMERGENCY PROCEDURES			1.0	0.2	0.4	
3. EMERGENCY PROCEDURES			1.0	0.2	0.4	
LESSON 6: PRE-SOLO						
1. PRE-SOLO REVIEW	1.4			0.5	0.1	
2. PRE-SOLO REVIEW	1.4			0.5	0.1	
3. PRE-SOLO REVIEW	1.4			0.5	0.1	
4. PRE-SOLO REVIEW	1.4			0.5	0.1	
5. PRE-SOLO REVIEW	1.4			0.5	0.1	
6. PRE-SOLO REVIEW	1.4			0.5	0.1	
7. PRE-SOLO REVIEW	1.3			0.5	0.1	
8. PRE-SOLO REVIEW	1.3			0.5	0.1	
LESSON 7: PRE-SOLO STAGE CHECK						
1. PRE-SOLO STAGE CHECK				1.0		
2. PRE-SOLO STAGE CHECK	1.2					
LESSON 8: SOLO IN THE PATERN						
1. SUPERVISED SOLO	0.5	0.5		0.5		
LESSON 9: AREA SOLO						
1. AREA ORIENTATION				1.0		
2. AREA CHECKOUT	1.0			0.5		
3. AREA SOLO		1.0				
TOTAL STAGE ONE TIMES	**18.5**	**1.5**	**4.0**	**19.8**	**1.8**	**0.0**

STAGE TWO FLIGHT TRAINING SUMMARY

Note: DU—dual, SO—solo, ATD—aviation training device, ORL—oral, INST—instrument, XC—cross-country

LESSON 1: SHORT/SOFT FIELD	**DU**	**SO**	**ATD**	**ORL**	**INST**	**XC**
1. SHORT/SOFT FIELD PROCEDURES				1.0		
2. SHORT/SOFT FIELD PRACTICE	1.0			0.5		
LESSON 2: NIGHT OPERATIONS						
1. NIGHT PROCEDURES				1.0		
2. NIGHT FLIGHT	1.0			0.5		
LESSON 3: INTRODUCTION TO VFR NAVIGATION						
1. CROSS-COUNTRY PROCEDURES				2.0		
2. CROSS-COUNTRY SIM			1.0	0.2		
3. CROSS-COUNTRY FLIGHT	2.0			1.0	0.2	2.0
LESSON 4: SOLO VFR CROSS-COUNTRY NAVIGATION						
1. NIGHT CROSS-COUNTRY	2.0			1.0		2.0
2. CROSS-COUNTRY REVIEW	2.0			1.0	0.2	2.0
3. CROSS-COUNTRY STAGE CHECK				1.0		
4. CROSS-COUNTRY ST. CHECK	1.5					
5. SOLO CROSS-COUNTRY		2.0		0.5		2.0
6. SOLO CROSS-COUNTRY		2.5		0.5		2.5
LESSON 5: PRACTICAL TEST PREPARATION						
1. PRIVATE PILOT REVIEW				1.0		
2. PRIVATE PILOT REVIEW	1.5			0.5	0.2	
3. PRIVATE PILOT REVIEW	1.5			0.5	0.2	
4. FINAL PRIVATE PILOT REVIEW	1.5			0.5	0.2	
5. FINAL STAGE CHECK				1.5		
6. FINAL STAGE CHECK	1.5				0.2	
7. FINAL GROUND REVIEW				1.0		
8. FINAL REVIEW FLIGHT	1.0					
TOTAL STAGE TWO TIMES	**16.5**	**4.5**	**1.0**	**15.2**	**1.2**	**10.5**
TOTAL COURSE TIMES	**35.0**	**6.0**	**5.0**	**34.0**	**3.0**	**10.5**

Note: Instructors must verify Part 141 minimum training times are met (20 hours dual, five hours solo, three hours night, three hours instrument, 35 hours total).

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PROFESSIONAL AVIATION 110
PRIVATE PILOT FLIGHT I: STAGE ONE FLIGHT TRAINING
SOLO FLIGHT

OBJECTIVES: During this stage, the student becomes familiar with the training airplane and learns to establish and maintain specific flight attitudes and ground tracks. The student begins to build the foundation of airmanship. The student will gain the confidence and proficiency to safely solo the training airplane in the traffic pattern and practice area.

INSTRUCTOR ACTIONS: Instructors use the lessons and units as guide for planning their instructional activities. They discuss, demonstrate, and critique, while monitoring student actions for safety of flight.

STUDENT ACTIONS: Students prepare for lessons and units, and ask pertinent questions. They learn to act as pilot in command, by practicing and performing to the given standards.

REQUIRED STUDY: Following each lesson, the instructor will look forward to the next planned lesson, and assign the student the listed maneuver items for book review from the Airplane Flying Handbook or suitable text.

COMPLETION STANDARDS: Prior to solo flight, the student will be given a comprehensive review, and must pass a written test. The stage is complete when the student has satisfactorily completed a supervised solo flight in the traffic pattern, as well as a solo flight in the local practice area.

FLIGHT STAGE 1, LESSON 1: BASICS

OBJECTIVES: This is an orientation to the training aircraft, preflight procedures, and to Louisiana Tech University Flight Operations. This lesson provides an opportunity for the instructor and student to become acquainted, and resolve questions about the flight training program. Unit 1 is typically broken up into two two-hour ground training sessions.
NOTE: Student is opted for Lesson 1, Units 2 and 3 upon completion of items 1 through 10.

SPECIAL SYLLABUS:

1. Create student records
    a. Verify citizenship; accomplish TSA endorsement
    b. Input student information to Talon/ETA, including emergency contact info
    c. Observe balance of student's debit account
2. Review of ETA Ops Check In
3. Introduce Flight Information File
4. Orientation to Flight Operations
    a. Emergency Exits/Fire Extinguishers
    b. Flight line safety
5. Completion of Flight Release Form, weight and balance and takeoff/landing performance
6. Aircraft dispatch procedures
7. Procedures Training
    a. Aircraft preflight postflight procedures; accomplish on aircraft if one is available
    b. Positive exchange of flight controls (discuss in Unit 1, accomplish in Unit 3)
    c. Discuss avionics use with reference to a desktop trainer, if available.
8. Emergency equipment use (ELT, fire extinguisher)
9. Assign home review of Louisiana Tech University Safety Procedures and Practices and Standard Operating Procedures
10. Complete and review written test on Louisiana Tech University Safety Procedures and Practices and Standard Operating Procedures
11. Weight and balance and Equipment List
12. Assign student to practice checklist usage ("chairfly").
13. Observe student's Airman Medical Certificate and Student Pilot Certificate. This lesson will not be graded "Complete" until the student possesses these.
14. Normally, the first flight will be to a nearby local airport.

COMPLETION STANDARDS: The student should be familiar with Louisiana Tech University policies and procedures, have a flight training record created, be in possession of an Airman Medical Certificate and Student Pilot Certificate, and have a basic knowledge of the training aircraft preflight. Emphasis will be on familiarization with the airplane, preflight procedures, use of checklists, and safety of flight. The student will accomplish a takeoff, be introduced to the four fundamentals and fly by composite references to a nearby airport.

FS1, L1, UNIT 1: (4.0 HOUR ORAL) FLIGHT OPERATIONS ORIENTATION

Preflight Preparation	U+
Ground Operations	
Normal Takeoff	
Short-field Takeoff	
Soft-field Takeoff	
Departure	
Steep Turns	
Slow Flight	
Power-off Stalls	
Power-on Stalls	
Ground Reference Maneuvers	
Enroute Descent	
Straight-In Approach	
Traffic Pattern	
Normal Landing	
Short-field Landing	
Soft-field Landing	
Slip to Land / No-Flap Land	
Night Operations	
Engine-out Procedures	
Engine-out Landing	
Basic Instrument Maneuvers	
Touch-and-Go	
Go-Around	
Communication	
Pilotage/Dead Reckoning	
Use of Navigation Systems	
Diversion	
Checklist Procedures	
Risk Management / Decision Making	
Task Management	
Situational Awareness	
Emergency Procedures	U+
General Knowledge	U+
Basic Aircraft Control	
Special Syllabus Requirements	NG+

FS1, L1, UNIT 2: (1.0 HOUR ATD) INTRODUCTION TO THE TRAINING AIRCRAFT

Preflight Preparation	U+
Ground Operations	U+
Normal Takeoff	U+
Short-field Takeoff	
Soft-field Takeoff	
Departure	U+
Steep Turns	
Slow Flight	
Power-off Stalls	
Power-on Stalls	
Ground Reference Maneuvers	
Enroute Descent	U+
Straight-In Approach	
Traffic Pattern	U+
Normal Landing	U+
Short-field Landing	
Soft-field Landing	
Slip to Land / No-Flap Land	
Night Operations	
Engine-out Procedures	
Engine-out Landing	
Basic Instrument Maneuvers	
Touch-and-Go	
Go-Around	
Communication	U+
Pilotage/Dead Reckoning	
Use of Navigation Systems	
Diversion	
Checklist Procedures	U+
Risk Management / Decision Making	U+
Task Management	U+
Situational Awareness	U+
Emergency Procedures	U+
General Knowledge	U+
Basic Aircraft Control	U+
Special Syllabus Requirements	

FS1, L1, UNIT 3: (1.2 HOUR DUAL) INTRODUCTION TO THE TRAINING AIRCRAFT

Preflight Preparation	U+
Ground Operations	U+
Normal Takeoff	U+
Short-field Takeoff	
Soft-field Takeoff	
Departure	U+
Steep Turns	
Slow Flight	
Power-off Stalls	
Power-on Stalls	
Ground Reference Maneuvers	
Enroute Descent	U+
Straight-In Approach	
Traffic Pattern	U+
Normal Landing	NG+
Short-field Landing	
Soft-field Landing	
Slip to Land / No-Flap Land	
Night Operations	
Engine-out Procedures	
Engine-out Landing	
Basic Instrument Maneuvers	
Touch-and-Go	
Go-Around	
Communication	U+
Pilotage/Dead Reckoning	
Use of Navigation Systems	NG+
Diversion	
Checklist Procedures	U+
Risk Management / Decision Making	U+
Task Management	U+
Situational Awareness	U+
Emergency Procedures	U+
General Knowledge	U+
Basic Aircraft Control	U+
Special Syllabus Requirements	NG+

FLIGHT STAGE 1, LESSON 2: AIRWORK

OBJECTIVES: This lesson is on private pilot maneuvers, aerodynamics, and human factors. This is an introduction to slow flight, steep turns, and stalls. Emergency flight by reference to instruments is introduced, with a focus on crosscheck and maintenance of aircraft control.

SPECIAL SYLLABUS:

1. The four forces of flight
2. Operational limits and V-speeds
3. Introduce the concept of "positive aircraft control"
4. Steep turns
5. Slow flight
6. Stall cause and recovery
7. Spin awareness and recovery (discussion)
8. Best glide speed and procedures for engine failure
9. Situational awareness: maintaining and regaining
10. Visual scan, clearing for traffic
11. Flight by reference to instruments, to include unusual attitude recovery
12. Ground effect and landing

COMPLETION STANDARDS: This lesson is complete when the student displays an understanding of the information covered. The student will recognize a stall and recover with instructor assistance. The student should experience flight solely by reference to instruments.

FS1, L2, UNIT 1: (1.0 HOUR ORAL) PRIVATE PILOT MANEUVERS

Preflight Preparation	
Ground Operations	
Normal Takeoff	
Short-field Takeoff	
Soft-field Takeoff	
Departure	
Steep Turns	
Slow Flight	
Power-off Stalls	
Power-on Stalls	
Ground Reference Maneuvers	
Enroute Descent	
Straight-In Approach	
Traffic Pattern	
Normal Landing	
Short-field Landing	
Soft-field Landing	
Slip to Land / No-Flap Land	
Night Operations	
Engine-out Procedures	
Engine-out Landing	
Basic Instrument Maneuvers	
Touch-and-Go	
Go-Around	
Communication	
Pilotage/Dead Reckoning	
Use of Navigation Systems	
Diversion	
Checklist Procedures	
Risk Management / Decision Making	
Task Management	
Situational Awareness	
Emergency Procedures	U+
General Knowledge	U+
Basic Aircraft Control	
Special Syllabus Requirements	NG+

FS 1, L2, UNIT 2: (1.2 HOUR DUAL) PRIVATE PILOT MANEUVERS

Preflight Preparation	U+
Ground Operations	U+
Normal Takeoff	U+
Short-field Takeoff	
Soft-field Takeoff	
Departure	U+
Steep Turns	U+
Slow Flight	U+
Power-off Stalls	U+
Power-on Stalls	U+
Ground Reference Maneuvers	
Enroute Descent	U+
Straight-In Approach	U
Traffic Pattern	U+
Normal Landing	U+
Short-field Landing	
Soft-field Landing	
Slip to Land / No-Flap Land	
Night Operations	
Engine-out Procedures	U+
Engine-out Landing	U+
Basic Instrument Maneuvers	U+
Touch-and-Go	U
Go-Around	U
Communication	U+
Pilotage/Dead Reckoning	
Use of Navigation Systems	
Diversion	
Checklist Procedures	U+
Risk Management / Decision Making	U+
Task Management	U+
Situational Awareness	U+
Emergency Procedures	U+
General Knowledge	U+
Basic Aircraft Control	U+
Special Syllabus Requirements	

FLIGHT STAGE 1, LESSON 3: GROUND REFERENCE MANEUVERS

OBJECTIVES: The instructor will brief the student on ground reference maneuvers (using suitable visual aids), as well as collision avoidance, and VFR flight. The objective of this lesson is to demonstrate the effects of wind on the ground track of the airplane. The instructor will select suitable ground references for the student to apply wind drift corrections for ground tracking. The instructor will discuss terminology associated with traffic pattern operations.

COMPLETION STANDARDS: This lesson is complete when the student understands the purpose and execution of ground reference maneuvers and controlling for wind in flight. The student should comprehend regulatory requirements for VFR, and should accomplish a review of Advisory Circular 90-48. The student will be expected to maintain the desired ground track and maintain altitude +/-200 feet of that assigned and airspeed +/- 10 knots. The student will be expected to demonstrate basic traffic pattern procedures.

FS1, L3, UNIT 1: (1.0 HOUR ORAL) GROUND REFERENCE MANEUVERS

Preflight Preparation	
Ground Operations	
Normal Takeoff	
Short-field Takeoff	
Soft-field Takeoff	
Departure	
Steep Turns	
Slow Flight	
Power-off Stalls	
Power-on Stalls	
Ground Reference Maneuvers	
Enroute Descent	
Straight-In Approach	
Traffic Pattern	
Normal Landing	
Short-field Landing	
Soft-field Landing	
Slip to Land / No-Flap Land	
Night Operations	
Engine-out Procedures	
Engine-out Landing	
Basic Instrument Maneuvers	
Touch-and-Go	
Go-Around	
Communication	
Pilotage/Dead Reckoning	
Use of Navigation Systems	
Diversion	
Checklist Procedures	
Risk Management / Decision Making	
Task Management	
Situational Awareness	
Emergency Procedures	U+
General Knowledge	U+
Basic Aircraft Control	
Special Syllabus Requirements	

FS1, L3, UNIT 2: (1.2 HOUR DUAL) GROUND REFERENCE MANEUVERS

Preflight Preparation	U+
Ground Operations	U+
Normal Takeoff	U+
Short-field Takeoff	
Soft-field Takeoff	
Departure	U+
Steep Turns	
Slow Flight	
Power-off Stalls	
Power-on Stalls	
Ground Reference Maneuvers	U+
Enroute Descent	U+
Straight-In Approach	U
Traffic Pattern	U+
Normal Landing	U+
Short-field Landing	
Soft-field Landing	
Slip to Land / No-Flap Land	
Night Operations	
Engine-out Procedures	U+
Engine-out Landing	U+
Basic Instrument Maneuvers	U+
Touch-and-Go	U
Go-Around	U
Communication	U+
Pilotage/Dead Reckoning	
Use of Navigation Systems	
Diversion	
Checklist Procedures	U+
Risk Management / Decision Making	U+
Task Management	U+
Situational Awareness	U+
Emergency Procedures	U+
General Knowledge	U+
Basic Aircraft Control	U+
Special Syllabus Requirements	

FLIGHT STAGE 1, LESSON 4: AIRPORT OPERATIONS

OBJECTIVES: The intent of this lesson is to focus on the traffic pattern, takeoffs, and landings. Direct reference to Airplane Flying Handbook, Chapters 5 & 8 is recommended for the oral portion. The objective of the device Unit is to practice consistent pacing, power settings, and procedures.

SPECIAL SYLLABUS:

1. Airfield and runway markings
2. Traffic pattern: altitudes, speeds, departure, and entry
3. Normal takeoff
4. Crosswind takeoff
5. Landings
6. Normal landing
7. Crosswind landing
8. Slip to landing
9. No-flap landing
10. Go around
11. Stabilized approach
12. Transition from approach to landing attitude
13. Landing attitude
14. Wake turbulence avoidance
15. Wind shear
16. Gust factor
17. Collision avoidance procedures
18. Faulty approaches and landings

COMPLETION STANDARDS: The student will demonstrate understanding of the takeoff and landing procedures discussed in this lesson. During this lesson, the student will practice traffic patterns, landings, and takeoffs. He/she will have been demonstrated the elements of normal and crosswind takeoffs and landings, go-around procedures, and corrections for improper approaches and faulty landings. The student will learn the proper spacing in the traffic pattern, and apply the appropriate regulations and emergency procedures. The student will practice traffic patterns, landings, and takeoffs. The student will be responsible for all radio communications, collision avoidance, and wake turbulence avoidance.

FS1, L4, UNIT 1: (1.0 HOUR ORAL) AIRPORT OPERATIONS, TAKEOFFS, AND LANDINGS

Preflight Preparation	
Ground Operations	
Normal Takeoff	
Short-field Takeoff	
Soft-field Takeoff	
Departure	
Steep Turns	
Slow Flight	
Power-off Stalls	
Power-on Stalls	
Ground Reference Maneuvers	
Enroute Descent	
Straight-In Approach	
Traffic Pattern	
Normal Landing	
Short-field Landing	
Soft-field Landing	
Slip to Land / No-Flap Land	
Night Operations	
Engine-out Procedures	
Engine-out Landing	
Basic Instrument Maneuvers	
Touch-and-Go	
Go-Around	
Communication	
Pilotage/Dead Reckoning	
Use of Navigation Systems	
Diversion	
Checklist Procedures	
Risk Management / Decision Making	
Task Management	
Situational Awareness	
Emergency Procedures	U+
General Knowledge	U+
Basic Aircraft Control	
Special Syllabus Requirements	NG+

FS1, L4, UNIT 2: (1.0 HOUR ATD) AIRPORT OPERATIONS, TAKEOFFS, LANDINGS

Preflight Preparation	U+
Ground Operations	U+
Normal Takeoff	U+
Short-field Takeoff	
Soft-field Takeoff	
Departure	U
Steep Turns	
Slow Flight	
Power-off Stalls	
Power-on Stalls	
Ground Reference Maneuvers	
Enroute Descent	U
Straight-In Approach	
Traffic Pattern	U+
Normal Landing	U+
Short-field Landing	
Soft-field Landing	
Slip to Land / No-Flap Land	U+
Night Operations	
Engine-out Procedures	
Engine-out Landing	
Basic Instrument Maneuvers	
Touch-and-Go	U+
Go-Around	U+
Communication	U+
Pilotage/Dead Reckoning	
Use of Navigation Systems	
Diversion	
Checklist Procedures	U+
Risk Management / Decision Making	U+
Task Management	U+
Situational Awareness	U+
Emergency Procedures	U+
General Knowledge	U+
Basic Aircraft Control	U+
Special Syllabus Requirements	NG+

FS1, L4, UNIT 3: (1.2 HOUR DUAL) AIRPORT OPERATIONS, TAKEOFFS, LANDINGS

Preflight Preparation	U+
Ground Operations	U+
Normal Takeoff	U+
Short-field Takeoff	
Soft-field Takeoff	
Departure	U
Steep Turns	
Slow Flight	
Power-off Stalls	
Power-on Stalls	
Ground Reference Maneuvers	
Enroute Descent	U
Straight-In Approach	
Traffic Pattern	U+
Normal Landing	U+
Short-field Landing	
Soft-field Landing	
Slip to Land / No-Flap Land	U+
Night Operations	
Engine-out Procedures	
Engine-out Landing	
Basic Instrument Maneuvers	
Touch-and-Go	U+
Go-Around	U+
Communication	U+
Pilotage/Dead Reckoning	
Use of Navigation Systems	
Diversion	
Checklist Procedures	U+
Risk Management / Decision Making	U+
Task Management	U+
Situational Awareness	U+
Emergency Procedures	U+
General Knowledge	U+
Basic Aircraft Control	U+
Special Syllabus Requirements	NG+

FLIGHT STAGE 1, LESSON 5: EMERGENCIES

OBJECTIVES: In this lesson, the student will discuss and practice emergency procedures. Hazardous flight conditions will be discussed, and practiced in the device.

SPECIAL SYLLABUS

1. AIM, Chapter 6
2. 49 CFR 830
3. NASA Aviation Safety Reporting System
4. Wake turbulence
5. Engine failure immediately after takeoff
6. Engine failure/restart
7. Engine failure/off-airport landing
8. Fires
9. Landing with a flat tire
10. Electrical system malfunctions
11. Vacuum system failure
12. Use of emergency checklists
13. Inadvertent cloud penetration, flight by reference to instruments
14. Slow flight/power curve
15. Hazards of stalls at low altitude
16. Stall recognition and recovery
17. Spins discuss
18. Incipient spin practice/recovery attempt
19. Emergency descent
20. Landing with 15 knots crosswind
21. Loss of positional awareness (lost) requesting assistance
    a. Radio communications
    b. Use of navigation systems/facilities
    c. Radar services

COMPLETION STANDARDS: This lesson is complete when the student has a basic understanding of the procedures for emergency operations. The student should be able to maintain aircraft control by reference to flight instruments.

FS1, L5, UNIT 1: (1.0 HOUR ORAL) EMERGENCY PROCEDURES

Preflight Preparation	
Ground Operations	
Normal Takeoff	
Short-field Takeoff	
Soft-field Takeoff	
Departure	
Steep Turns	
Slow Flight	
Power-off Stalls	
Power-on Stalls	
Ground Reference Maneuvers	
Enroute Descent	
Straight-In Approach	
Traffic Pattern	
Normal Landing	
Short-field Landing	
Soft-field Landing	
Slip to Land / No-Flap Land	
Night Operations	
Engine-out Procedures	
Engine-out Landing	
Basic Instrument Maneuvers	
Touch-and-Go	
Go-Around	
Communication	
Pilotage/Dead Reckoning	
Use of Navigation Systems	
Diversion	
Checklist Procedures	
Risk Management / Decision Making	
Task Management	
Situational Awareness	
Emergency Procedures	U+
General Knowledge	U+
Basic Aircraft Control	
Special Syllabus Requirements	NG+

FS1, L5, UNIT 2: (1.0 HOUR ATD) EMERGENCY PROCEDURES

Preflight Preparation	U+
Ground Operations	U+
Normal Takeoff	U+
Short-field Takeoff	
Soft-field Takeoff	
Departure	U+
Steep Turns	U+
Slow Flight	U+
Power-off Stalls	U+
Power-on Stalls	U+
Ground Reference Maneuvers	U+
Enroute Descent	U+
Straight-In Approach	U
Traffic Pattern	U+
Normal Landing	U
Short-field Landing	
Soft-field Landing	
Slip to Land / No-Flap Land	
Night Operations	
Engine-out Procedures	U+
Engine-out Landing	U+
Basic Instrument Maneuvers	U+
Touch-and-Go	U
Go-Around	U
Communication	U+
Pilotage/Dead Reckoning	
Use of Navigation Systems	
Diversion	
Checklist Procedures	U+
Risk Management / Decision Making	U+
Task Management	U+
Situational Awareness	U+
Emergency Procedures	U+
General Knowledge	U+
Basic Aircraft Control	U+
Special Syllabus Requirements	NG+

FS1, L5, UNIT 3: (1.0 HOUR ATD) EMERGENCY PROCEDURES

Preflight Preparation	U+
Ground Operations	U+
Normal Takeoff	U+
Short-field Takeoff	
Soft-field Takeoff	
Departure	U+
Steep Turns	U+
Slow Flight	U+
Power-off Stalls	U+
Power-on Stalls	U+
Ground Reference Maneuvers	U+
Enroute Descent	U+
Straight-In Approach	U
Traffic Pattern	U+
Normal Landing	U
Short-field Landing	
Soft-field Landing	
Slip to Land / No-Flap Land	
Night Operations	
Engine-out Procedures	U+
Engine-out Landing	U+
Basic Instrument Maneuvers	U+
Touch-and-Go	U
Go-Around	U
Communication	U+
Pilotage/Dead Reckoning	
Use of Navigation Systems	
Diversion	
Checklist Procedures	U+
Risk Management / Decision Making	U+
Task Management	U+
Situational Awareness	U+
Emergency Procedures	F+
General Knowledge	U+
Basic Aircraft Control	U+
Special Syllabus Requirements	NG+

FLIGHT STAGE 1, LESSON 6: PRE-SOLO

OBJECTIVES: This lesson provides the opportunity for the assigned flight instructor to determine by discussion and performance that the student is prepared for solo flight.

SPECIAL SYLLABUS:

1. The pre-solo written test will be accomplished during this lesson.
2. Instructor will demonstrate cross-control stalls, accelerated stalls, and spins.
3. The student will enter and recover from a spin.
4. The student will practice slow flight without the use of flaps.
    a. Grade Special Syllabus "NG" on the Unit in which Items 1through 4 are all accomplished.
5. Instructor will demonstrate emergency descent during the first sortie. Student will perform emergency descent on each subsequent sortie in the lesson

COMPLETION STANDARDS: This lesson is complete when the student demonstrates the knowledge and skill level required for solo operations. All plus-items must be graded Fair, i.e. safe level of proficiency, to continue beyond this lesson.

FS1, L6, UNIT 1: (1.4 HOUR DUAL) PRE-SOLO REVIEW

Preflight Preparation	U
Ground Operations	U
Normal Takeoff	U
Short-field Takeoff	
Soft-field Takeoff	
Departure	U
Steep Turns	U
Slow Flight	U
Power-off Stalls	U
Power-on Stalls	U
Ground Reference Maneuvers	U
Enroute Descent	U
Straight-In Approach	U
Traffic Pattern	U
Normal Landing	U
Short-field Landing	
Soft-field Landing	
Slip to Land / No-Flap Land	U
Night Operations	
Engine-out Procedures	U
Engine-out Landing	U
Basic Instrument Maneuvers	U
Touch-and-Go	U
Go-Around	U
Communication	U
Pilotage/Dead Reckoning	
Use of Navigation Systems	
Diversion	
Checklist Procedures	U
Risk Management / Decision Making	U
Task Management	U
Situational Awareness	U
Emergency Procedures	U
General Knowledge	U
Basic Aircraft Control	U
Special Syllabus Requirements	NG

FS1, L6, UNIT 2: (1.4 HOUR DUAL) PRE-SOLO REVIEW

Preflight Preparation	U
Ground Operations	U
Normal Takeoff	U
Short-field Takeoff	
Soft-field Takeoff	
Departure	U
Steep Turns	U
Slow Flight	U
Power-off Stalls	U
Power-on Stalls	U
Ground Reference Maneuvers	U
Enroute Descent	U
Straight-In Approach	U
Traffic Pattern	U
Normal Landing	U
Short-field Landing	
Soft-field Landing	
Slip to Land / No-Flap Land	U
Night Operations	
Engine-out Procedures	U
Engine-out Landing	U
Basic Instrument Maneuvers	U
Touch-and-Go	U
Go-Around	U
Communication	U
Pilotage/Dead Reckoning	
Use of Navigation Systems	
Diversion	
Checklist Procedures	U
Risk Management / Decision Making	U
Task Management	U
Situational Awareness	U
Emergency Procedures	U
General Knowledge	U
Basic Aircraft Control	U
Special Syllabus Requirements	NG

FS1, L6, UNIT 3: (1.4 HOUR DUAL) PRE-SOLO REVIEW

Preflight Preparation	U
Ground Operations	U
Normal Takeoff	U
Short-field Takeoff	
Soft-field Takeoff	
Departure	U
Steep Turns	U
Slow Flight	U
Power-off Stalls	U
Power-on Stalls	U
Ground Reference Maneuvers	U
Enroute Descent	U
Straight-In Approach	U
Traffic Pattern	U
Normal Landing	U
Short-field Landing	
Soft-field Landing	
Slip to Land / No-Flap Land	U
Night Operations	
Engine-out Procedures	U
Engine-out Landing	U
Basic Instrument Maneuvers	U
Touch-and-Go	U
Go-Around	U
Communication	U
Pilotage/Dead Reckoning	
Use of Navigation Systems	
Diversion	
Checklist Procedures	U
Risk Management / Decision Making	U
Task Management	U
Situational Awareness	U
Emergency Procedures	U
General Knowledge	U
Basic Aircraft Control	U
Special Syllabus Requirements	NG

FS1, L6, UNIT 4: (1.4 HOUR DUAL) PRE-SOLO REVIEW

Preflight Preparation	U
Ground Operations	U
Normal Takeoff	U
Short-field Takeoff	
Soft-field Takeoff	
Departure	U
Steep Turns	U
Slow Flight	U
Power-off Stalls	U
Power-on Stalls	U
Ground Reference Maneuvers	U
Enroute Descent	U
Straight-In Approach	U
Traffic Pattern	U
Normal Landing	U
Short-field Landing	
Soft-field Landing	
Slip to Land / No-Flap Land	U
Night Operations	
Engine-out Procedures	U
Engine-out Landing	U
Basic Instrument Maneuvers	U
Touch-and-Go	U
Go-Around	U
Communication	U
Pilotage/Dead Reckoning	
Use of Navigation Systems	
Diversion	
Checklist Procedures	U
Risk Management / Decision Making	U
Task Management	U
Situational Awareness	U
Emergency Procedures	U
General Knowledge	U
Basic Aircraft Control	U
Special Syllabus Requirements	NG

FS1, L6, UNIT 5: (1.4 HOUR DUAL) PRE-SOLO REVIEW

Preflight Preparation	U
Ground Operations	U
Normal Takeoff	U
Short-field Takeoff	
Soft-field Takeoff	
Departure	U
Steep Turns	U
Slow Flight	U
Power-off Stalls	U
Power-on Stalls	U
Ground Reference Maneuvers	U
Enroute Descent	U
Straight-In Approach	U
Traffic Pattern	U
Normal Landing	U
Short-field Landing	
Soft-field Landing	
Slip to Land / No-Flap Land	U
Night Operations	
Engine-out Procedures	U
Engine-out Landing	U
Basic Instrument Maneuvers	U
Touch-and-Go	U
Go-Around	U
Communication	U
Pilotage/Dead Reckoning	
Use of Navigation Systems	
Diversion	
Checklist Procedures	U
Risk Management / Decision Making	U
Task Management	U
Situational Awareness	U
Emergency Procedures	U
General Knowledge	U
Basic Aircraft Control	U
Special Syllabus Requirements	NG

FS1, L6, UNIT 6: (1.4 HOUR DUAL) PRE-SOLO REVIEW

Preflight Preparation	U
Ground Operations	U
Normal Takeoff	U
Short-field Takeoff	
Soft-field Takeoff	
Departure	U
Steep Turns	U
Slow Flight	U
Power-off Stalls	U
Power-on Stalls	U
Ground Reference Maneuvers	U
Enroute Descent	U
Straight-In Approach	U
Traffic Pattern	U
Normal Landing	U
Short-field Landing	
Soft-field Landing	
Slip to Land / No-Flap Land	U
Night Operations	
Engine-out Procedures	U
Engine-out Landing	U
Basic Instrument Maneuvers	U
Touch-and-Go	U
Go-Around	U
Communication	U
Pilotage/Dead Reckoning	
Use of Navigation Systems	
Diversion	
Checklist Procedures	U
Risk Management / Decision Making	U
Task Management	U
Situational Awareness	U
Emergency Procedures	U
General Knowledge	U
Basic Aircraft Control	U
Special Syllabus Requirements	NG

FS1, L6, UNIT 7: (1.3 HOUR DUAL) PRE-SOLO REVIEW

Preflight Preparation	U
Ground Operations	U
Normal Takeoff	U
Short-field Takeoff	
Soft-field Takeoff	
Departure	U
Steep Turns	U
Slow Flight	U
Power-off Stalls	U
Power-on Stalls	U
Ground Reference Maneuvers	U
Enroute Descent	U
Straight-In Approach	U
Traffic Pattern	U
Normal Landing	U
Short-field Landing	
Soft-field Landing	
Slip to Land / No-Flap Land	U
Night Operations	
Engine-out Procedures	U
Engine-out Landing	U
Basic Instrument Maneuvers	U
Touch-and-Go	U
Go-Around	U
Communication	U
Pilotage/Dead Reckoning	
Use of Navigation Systems	
Diversion	
Checklist Procedures	U
Risk Management / Decision Making	U
Task Management	U
Situational Awareness	U
Emergency Procedures	U
General Knowledge	U
Basic Aircraft Control	U
Special Syllabus Requirements	NG+

FS1, L6, UNIT 8: (1.3 HOUR DUAL) FINAL PRE-SOLO REVIEW

Preflight Preparation	F+
Ground Operations	F+
Normal Takeoff	F+
Short-field Takeoff	
Soft-field Takeoff	
Departure	F+
Steep Turns	F+
Slow Flight	F+
Power-off Stalls	F+
Power-on Stalls	F+
Ground Reference Maneuvers	F+
Enroute Descent	F+
Straight-In Approach	F+
Traffic Pattern	F+
Normal Landing	F+
Short-field Landing	
Soft-field Landing	
Slip to Land / No-Flap Land	F+
Night Operations	
Engine-out Procedures	F+
Engine-out Landing	F+
Basic Instrument Maneuvers	U
Touch-and-Go	F+
Go-Around	F+
Communication	F+
Pilotage/Dead Reckoning	
Use of Navigation Systems	
Diversion	
Checklist Procedures	F+
Risk Management / Decision Making	F+
Task Management	F+
Situational Awareness	F+
Emergency Procedures	F+
General Knowledge	F+
Basic Aircraft Control	F+
Special Syllabus Requirements	

FLIGHT STAGE 1, LESSON 7: PRE-SOLO STAGE CHECK

OBJECTIVES: During this lesson, a check instructor will verify that the student is capable of conducting solo flights safely and is qualified for solo operations.

SPECIAL SYLLABUS:

1. Prior to beginning this stage check, the student must have passed the pre-solo written examination. The check instructor will discuss the results of this examination.
2. The check instructor will discuss with the student:
    a. Knowledge of the aircraft and aircraft procedures
    b. Operating in the local area
    c. Airport operating procedures and communications
    d. Emergencies
    e. Student pilot limitations
    f. Stall awareness, spin avoidance and recovery

COMPLETION STANDARDS: This lesson is complete when the student demonstrates the level of aeronautical knowledge and skill needed to conduct solo flight safely.

FS1, L7, UNIT 1: (1.0 HOUR ORAL) PRE-SOLO STAGE CHECK

Preflight Preparation	
Ground Operations	
Normal Takeoff	
Short-field Takeoff	
Soft-field Takeoff	
Departure	
Steep Turns	
Slow Flight	
Power-off Stalls	
Power-on Stalls	
Ground Reference Maneuvers	
Enroute Descent	
Straight-In Approach	
Traffic Pattern	
Normal Landing	
Short-field Landing	
Soft-field Landing	
Slip to Land / No-Flap Land	
Night Operations	
Engine-out Procedures	
Engine-out Landing	
Basic Instrument Maneuvers	
Touch-and-Go	
Go-Around	
Communication	
Pilotage/Dead Reckoning	
Use of Navigation Systems	
Diversion	
Checklist Procedures	
Risk Management / Decision Making	
Task Management	
Situational Awareness	
Emergency Procedures	F+
General Knowledge	F+
Basic Aircraft Control	
Special Syllabus Requirements	NG+

FS1, L7, UNIT 2: (1.2 HOUR DUAL) PRE-SOLO STAGE CHECK

Preflight Preparation	F+
Ground Operations	F+
Normal Takeoff	F+
Short-field Takeoff	
Soft-field Takeoff	
Departure	F+
Steep Turns	F+
Slow Flight	F+
Power-off Stalls	F+
Power-on Stalls	F+
Ground Reference Maneuvers	F+
Enroute Descent	F+
Straight-In Approach	F
Traffic Pattern	F+
Normal Landing	F+
Short-field Landing	
Soft-field Landing	
Slip to Land / No-Flap Land	F
Night Operations	
Engine-out Procedures	F+
Engine-out Landing	
Basic Instrument Maneuvers	
Touch-and-Go	F
Go-Around	F+
Communication	F+
Pilotage/Dead Reckoning	
Use of Navigation Systems	
Diversion	
Checklist Procedures	F+
Risk Management / Decision Making	F+
Task Management	F+
Situational Awareness	F+
Emergency Procedures	F+
General Knowledge	F+
Basic Aircraft Control	F+
Special Syllabus Requirements	

FLIGHT STAGE 1, LESSON 8: SOLO IN THE PATTERN

OBJECTIVES: During this lesson the student will build confidence by soloing the aircraft in the traffic pattern under the supervision of the instructor.

SPECIAL SYLLABUS:

1. The student will accomplish a minimum of three supervised solo takeoffs and landings to a full stop.
2. This lesson is "Dual/Solo". The instructor will physically observe the student's pattern solo.
3. After initial solo, the student will be presented a certificate noting their achievement.

COMPLETION STANDARDS: The student will be required to pilot, as the sole occupant, the aircraft in the traffic pattern, accomplishing at least three takeoffs and landings to a full stop.

FS1, L8, UNIT 1: (1.0 HOUR DUAL/SOLO) SUPERVISED SOLO

Preflight Preparation	F+
Ground Operations	F+
Normal Takeoff	F+
Short-field Takeoff	
Soft-field Takeoff	
Departure	F
Steep Turns	F
Slow Flight	F
Power-off Stalls	F
Power-on Stalls	F
Ground Reference Maneuvers	F
Enroute Descent	F
Straight-In Approach	F
Traffic Pattern	F+
Normal Landing	F+
Short-field Landing	
Soft-field Landing	
Slip to Land / No-Flap Land	F
Night Operations	
Engine-out Procedures	F
Engine-out Landing	
Basic Instrument Maneuvers	
Touch-and-Go	F
Go-Around	F
Communication	F+
Pilotage/Dead Reckoning	
Use of Navigation Systems	
Diversion	
Checklist Procedures	F+
Risk Management / Decision Making	F+
Task Management	F+
Situational Awareness	F+
Emergency Procedures	F+
General Knowledge	F+
Basic Aircraft Control	F+
Special Syllabus Requirements	NG+

FLIGHT STAGE 1, LESSON 9: AREA CHECKOUT AND AREA SOLO

OBJECTIVE: The emphasis in this lesson is to verify that the student can get to and from the practice area safely without instructor assistance, using pilotage and navigational aids. Unusual flight attitudes will be introduced to the student with the focus on recovery procedures.

SPECIAL SYLLABUS:

1. Magnetic compass turns
2. VOR and GPS orientation
3. Emergency and critical situations
    a. Unusual flight attitudes
    b. Lost Procedures
    c. Deteriorating weather situations
    d. Loss of gyro instruments
    e. Eminent engine failure / precautionary landing
4. Sectional Aeronautical Chart
5. Orientation of practice areas and their boundaries
6. Information on surrounding airports
7. Prominent landmarks and hazards in area

COMPLETION STANDARDS: This lesson is complete when the student operates a successful solo training sortie in the local practice area. The area solo completes PRAV 110. The instructor will bring this fact to the attention of the Chief Instructor.

FS1, L9, UNIT 1: (1.0 HOUR ORAL) AREA ORIENTATION

Preflight Preparation	
Ground Operations	
Normal Takeoff	
Short-field Takeoff	
Soft-field Takeoff	
Departure	
Steep Turns	
Slow Flight	
Power-off Stalls	
Power-on Stalls	
Ground Reference Maneuvers	
Enroute Descent	
Straight-In Approach	
Traffic Pattern	
Normal Landing	
Short-field Landing	
Soft-field Landing	
Slip to Land / No-Flap Land	
Night Operations	
Engine-out Procedures	
Engine-out Landing	
Basic Instrument Maneuvers	
Touch-and-Go	
Go-Around	
Communication	
Pilotage/Dead Reckoning	
Use of Navigation Systems	
Diversion	
Checklist Procedures	
Risk Management / Decision Making	
Task Management	
Situational Awareness	
Emergency Procedures	F+
General Knowledge	F+
Basic Aircraft Control	
Special Syllabus Requirements	NG+

FS1, L9, UNIT 2: (1.0 HOUR DUAL) AREA CHECKOUT

Preflight Preparation	F+
Ground Operations	F+
Normal Takeoff	F+
Short-field Takeoff	
Soft-field Takeoff	
Departure	F+
Steep Turns	F+
Slow Flight	F+
Power-off Stalls	F+
Power-on Stalls	F+
Ground Reference Maneuvers	F
Enroute Descent	F+
Straight-In Approach	F
Traffic Pattern	F+
Normal Landing	F+
Short-field Landing	
Soft-field Landing	
Slip to Land / No-Flap Land	F
Night Operations	
Engine-out Procedures	F
Engine-out Landing	F
Basic Instrument Maneuvers	F+
Touch-and-Go	F
Go-Around	F
Communication	F+
Pilotage/Dead Reckoning	F+
Use of Navigation Systems	F+
Diversion	
Checklist Procedures	F+
Risk Management / Decision Making	F+
Task Management	F+
Situational Awareness	F+
Emergency Procedures	F+
General Knowledge	F+
Basic Aircraft Control	F+
Special Syllabus Requirements	NG+

FS1, L9, UNIT 3: (1.0 HOUR SOLO) AREA SOLO

Preflight Preparation	NG+
Ground Operations	NG+
Normal Takeoff	NG+
Short-field Takeoff	
Soft-field Takeoff	
Departure	NG+
Steep Turns	NG+
Slow Flight	NG+
Power-off Stalls	NG
Power-on Stalls	NG
Ground Reference Maneuvers	NG
Enroute Descent	NG+
Straight-In Approach	
Traffic Pattern	NG+
Normal Landing	NG+
Short-field Landing	
Soft-field Landing	
Slip to Land / No-Flap Land	NG
Night Operations	
Engine-out Procedures	
Engine-out Landing	
Basic Instrument Maneuvers	
Touch-and-Go	NG
Go-Around	NG
Communication	NG+
Pilotage/Dead Reckoning	NG+
Use of Navigation Systems	NG
Diversion	
Checklist Procedures	NG+
Risk Management / Decision Making	NG+
Task Management	NG+
Situational Awareness	NG+
Emergency Procedures	
General Knowledge	NG+
Basic Aircraft Control	NG+
Special Syllabus Requirements	

PROFESSIONAL AVIATION 111
PRIVATE PILOT FLIGHT II: STAGE TWO FLIGHT TRAINING
PRIVATE PILOT OPERATIONS

OBJECTIVES: During this stage, the student will be instructed in all areas of operation and tasks required for the Private Pilot Practical Test. This includes local and cross-country flights, operations into unfamiliar airports, soft and short-field takeoff and landing procedures, and night operations.

INSTRUCTOR ACTIONS: Instructors use the lessons and units as guides for planning their instructional activities. They discuss, demonstrate, and critique, while monitoring student actions for safety of flight. Instructors approve students' cross-country destinations, and review students' cross-country plans in detail, prior to endorsement.

STUDENT ACTIONS: Students prepare for lessons and units, and ask pertinent questions. They act as pilot in command, by practicing and performing to the given standards.

REQUIRED STUDY: Following each lesson, the instructor will look forward to the next planned lesson, and assign the student the listed maneuver items for book review from the Airplane Flying Handbook or suitable text.

COMPLETION STANDARDS: This stage is complete when the student meets the requirements of 14 CFR 141, Appendix B, and demonstrates knowledge and proficiency to the level required by the Private Pilot ACS.

FLIGHT STAGE 2, LESSON 1: SHORT AND SOFT-FIELD TAKEOFF AND LANDING

OBJECTIVES: This lesson is an instructor briefing on procedures and techniques for operating into and out of short and soft fields. The instructor will also introduce ATC light gun signals and review basic flight maneuvers.

CONTENTS:
The instructor will discuss the following with the student:

1. Short-Field Operations/obstacle climbout
2. Soft-Field Operations
3. Aircraft Handbook
4. Performance data for short and soft-field operations
5. Review of Basic Maneuvers
6. Stall and spin awareness and prevention
7. ATC light gun signals

COMPLETION STANDARDS: At the completion of this lesson, the student understands the procedures and techniques for short and soft-field takeoffs and landings. He/she will be expected to explain basic flight maneuvers and ATC light gun signals. He/she will be expected to perform recovery from an incipient spin.

FS2, L1, UNIT 1: (1.0 HOUR ORAL) SHORT AND SOFT-FIELD PROCEDURES

Preflight Preparation	
Ground Operations	
Normal Takeoff	
Short-field Takeoff	
Soft-field Takeoff	
Departure	
Steep Turns	
Slow Flight	
Power-off Stalls	
Power-on Stalls	
Ground Reference Maneuvers	
Enroute Descent	
Straight-In Approach	
Traffic Pattern	
Normal Landing	
Short-field Landing	
Soft-field Landing	
Slip to Land / No-Flap Land	
Night Operations	
Engine-out Procedures	
Engine-out Landing	
Basic Instrument Maneuvers	
Touch-and-Go	
Go-Around	
Communication	
Pilotage/Dead Reckoning	
Use of Navigation Systems	
Diversion	
Checklist Procedures	
Risk Management / Decision Making	
Task Management	
Situational Awareness	
Emergency Procedures	F+
General Knowledge	F+
Basic Aircraft Control	
Special Syllabus Requirements	NG+

FS2, L1, UNIT 2: (1.0 HOUR DUAL) SHORT AND SOFT-FIELD PRACTICE

Preflight Preparation	F+
Ground Operations	F+
Normal Takeoff	F
Short-field Takeoff	U+
Soft-field Takeoff	U+
Departure	F+
Steep Turns	F+
Slow Flight	F+
Power-off Stalls	F+
Power-on Stalls	F+
Ground Reference Maneuvers	F
Enroute Descent	F+
Straight-In Approach	F
Traffic Pattern	F+
Normal Landing	F
Short-field Landing	U+
Soft-field Landing	U+
Slip to Land / No-Flap Land	F
Night Operations	
Engine-out Procedures	F
Engine-out Landing	F
Basic Instrument Maneuvers	F+
Touch-and-Go	F
Go-Around	F
Communication	F+
Pilotage/Dead Reckoning	F+
Use of Navigation Systems	F+
Diversion	
Checklist Procedures	F+
Risk Management / Decision Making	F+
Task Management	F+
Situational Awareness	F+
Emergency Procedures	F+
General Knowledge	F+
Basic Aircraft Control	F+
Special Syllabus Requirements	NG+

FLIGHT STAGE 2, LESSON 2: NIGHT OPERATIONS

OBJECTIVES: During this lesson, the student will be briefed on night flight operations and potential emergency situations that may occur at night. The briefing will also include physiological factors associated with night flight, aircraft lighting, navigation, and night techniques for coping with distractions that are typically encountered during night ground and flight operations. The student will experience a night local sortie.

SPECIAL SYLLABUS:

The instructor will discuss or accomplish the following with the student:

1. Night flight considerations
    a. Vision
    b. Judgment
    c. Visual illusions and spatial disorientation
    d. Recognition of other aircraft and their relative position by lights
    e. Weather (cloud height, temperature/dew point spread, winds)
2. Appropriate FARs
3. Equipment required
4. Recency of experience
5. Night navigation
6. Airport lighting
7. Clearing
8. Navigation techniques and considerations
9. Use of magnetic compass
10. Night piloting techniques
11. Taxiing
12. Safe speeds
13. Runway alignment for takeoff
14. Approaches and landings
15. Maintaining a safe climb and approach path
16. Basic instrument maneuvers
17. Night emergencies
18. Engine failure
19. Weather problems
20. Failure of cockpit and landing lights
21. Complete electrical failure
22. Lost procedures
23. Distractions during night operations
24. Night worksheet
25. Five takeoffs and landings

COMPLETION STANDARDS: This lesson is complete when the student flies the night orientation sortie and displays a safe level of knowledge and proficiency. He/she should respond correctly to questions on night flight procedures, emergency procedures, and how to maintain orientation at night. He/she must understand the use of ground lighting and visual aids. The student makes a minimum of five takeoffs and landings as sole manipulator of the controls.

FS2, L2, UNIT 1: (1.0 HOUR ORAL) NIGHT PROCEDURES

Preflight Preparation	
Ground Operations	
Normal Takeoff	
Short-field Takeoff	
Soft-field Takeoff	
Departure	
Steep Turns	
Slow Flight	
Power-off Stalls	
Power-on Stalls	
Ground Reference Maneuvers	
Enroute Descent	
Straight-In Approach	
Traffic Pattern	
Normal Landing	
Short-field Landing	
Soft-field Landing	
Slip to Land / No-Flap Land	
Night Operations	
Engine-out Procedures	
Engine-out Landing	
Basic Instrument Maneuvers	
Touch-and-Go	
Go-Around	
Communication	
Pilotage/Dead Reckoning	
Use of Navigation Systems	
Diversion	
Checklist Procedures	
Risk Management / Decision Making	
Task Management	
Situational Awareness	
Emergency Procedures	F+
General Knowledge	F+
Basic Aircraft Control	
Special Syllabus Requirements	NG+

FS2, L2, UNIT 2: (1.0 HOUR DUAL) NIGHT FLIGHT

Preflight Preparation	F+
Ground Operations	F+
Normal Takeoff	F+
Short-field Takeoff	
Soft-field Takeoff	
Departure	F+
Steep Turns	
Slow Flight	
Power-off Stalls	
Power-on Stalls	
Ground Reference Maneuvers	
Enroute Descent	F+
Straight-In Approach	F
Traffic Pattern	F+
Normal Landing	F+
Short-field Landing	
Soft-field Landing	
Slip to Land / No-Flap Land	
Night Operations	F+
Engine-out Procedures	F
Engine-out Landing	
Basic Instrument Maneuvers	F
Touch-and-Go	F
Go-Around	F+
Communication	F+
Pilotage/Dead Reckoning	F+
Use of Navigation Systems	F+
Diversion	
Checklist Procedures	F+
Risk Management / Decision Making	F+
Task Management	F+
Situational Awareness	F+
Emergency Procedures	F+
General Knowledge	F+
Basic Aircraft Control	F+
Special Syllabus Requirements	NG+

FLIGHT STAGE 2, LESSON 3: INTRODUCTION TO VFR NAVIGATION

OBJECTIVE: The objective is to utilize the training aircraft safely and efficiently for cross-country travel.

SPECIAL SYLLABUS:

1. Operational data
    a. Weight and balance
    b. Airplane performance/Aircraft endurance
2. Airplane documents
    a. Airworthiness inspection/Maintenance records
    b. Required equipment and instruments
3. Types of navigation
    a. Pilotage and dead reckoning
    b. Radio navigation
4. Use of magnetic compass
5. Flight planning
    a. Plotting courses and checkpoints
    b. Preparing a flight log and filing, opening, and closing a flight plan
    c. Airport information/NOTAMS/Airport Facility Directory
6. Airport procedures at towered and non-towered airports, airports with FSS's, and use of approach control for traffic and airport information.
7. Post-refueling check
8. Airspace rules including
    a. Non-towered, towered, and special use airspace
    b. Flying on victor airways
    c. Communications within class B and C airspace
9. Analyzing weather
10. Cross-country emergencies
    a. Deteriorating and weather not forecasted, unexpected winds, and inadvertent entry into instrument conditions
    b. Diversion to alternate procedures
    c. Low fuel and forced landing procedures
    d. Lost procedures and radar vectors

COMPLETION STANDARDS: This lesson is complete when the student has demonstrated the ability to accomplish a cross-country flight log, procure and analyze the weather for the flight, and fly the route as planned. He/she should be able to apply pilotage, dead reckoning and radio navigation procedures to the flight plan and demonstrate knowledge of the information available in the appropriate publications. He/she must be able to calculate airplane weight and balance and performance. The student will be expected to maintain altitude within 200 feet and fly the planned course while maintaining the planned power settings. The student must be able to correctly identify the airplane's position and determine estimated time of arrival over planned checkpoints and destination within 5 minutes. The student will be required to plan for diversion to an alternate destination and navigate using the magnetic compass.

FS2, L3, UNIT 1: (2.0 ORAL) CROSS-COUNTRY PROCEDURES

Preflight Preparation	
Ground Operations	
Normal Takeoff	
Short-field Takeoff	
Soft-field Takeoff	
Departure	
Steep Turns	
Slow Flight	
Power-off Stalls	
Power-on Stalls	
Ground Reference Maneuvers	
Enroute Descent	
Straight-In Approach	
Traffic Pattern	
Normal Landing	
Short-field Landing	
Soft-field Landing	
Slip to Land / No-Flap Land	
Night Operations	
Engine-out Procedures	
Engine-out Landing	
Basic Instrument Maneuvers	
Touch-and-Go	
Go-Around	
Communication	
Pilotage/Dead Reckoning	
Use of Navigation Systems	
Diversion	
Checklist Procedures	
Risk Management / Decision Making	
Task Management	
Situational Awareness	
Emergency Procedures	F+
General Knowledge	F+
Basic Aircraft Control	
Special Syllabus Requirements	NG+

FS2, L3, UNIT 2: (1.0 ATD) CROSS-COUNTRY SIM

Preflight Preparation	U+
Ground Operations	F+
Normal Takeoff	F
Short-field Takeoff	U
Soft-field Takeoff	U
Departure	F+
Steep Turns	
Slow Flight	
Power-off Stalls	
Power-on Stalls	
Ground Reference Maneuvers	
Enroute Descent	F+
Straight-In Approach	F
Traffic Pattern	F
Normal Landing	U
Short-field Landing	U
Soft-field Landing	U
Slip to Land / No-Flap Land	U
Night Operations	F
Engine-out Procedures	F
Engine-out Landing	F
Basic Instrument Maneuvers	F+
Touch-and-Go	F
Go-Around	F
Communication	F+
Pilotage/Dead Reckoning	F
Use of Navigation Systems	F+
Diversion	F
Checklist Procedures	F+
Risk Management / Decision Making	F+
Task Management	F+
Situational Awareness	F+
Emergency Procedures	F+
General Knowledge	F+
Basic Aircraft Control	F+
Special Syllabus Requirements	NG+

FS2, L3, UNIT 3: (2.0 DUAL) CROSS-COUNTRY FLIGHT

Preflight Preparation	F+
Ground Operations	F+
Normal Takeoff	F
Short-field Takeoff	U+
Soft-field Takeoff	U+
Departure	F+
Steep Turns	
Slow Flight	
Power-off Stalls	
Power-on Stalls	
Ground Reference Maneuvers	
Enroute Descent	F+
Straight-In Approach	F
Traffic Pattern	F+
Normal Landing	F
Short-field Landing	U+
Soft-field Landing	U+
Slip to Land / No-Flap Land	F
Night Operations	
Engine-out Procedures	F
Engine-out Landing	F
Basic Instrument Maneuvers	F+
Touch-and-Go	F
Go-Around	F
Communication	F+
Pilotage/Dead Reckoning	F+
Use of Navigation Systems	F+
Diversion	F
Checklist Procedures	F+
Risk Management / Decision Making	F+
Task Management	F+
Situational Awareness	F+
Emergency Procedures	F+
General Knowledge	F+
Basic Aircraft Control	F+
Special Syllabus Requirements	NG+

FLIGHT STAGE 2, LESSON 4: SOLO VFR CROSS-COUNTRY NAVIGATION

OBJECTIVE: This lesson provides the opportunity for the flight instructor to prepare the student for solo cross-country flight.

SPECIAL SYLLABUS:

1. The student must accomplish and log three traffic patterns and full-stop landings at an airport with an operating control tower.
2. The student must accomplish one solo 100 nautical miles cross-country flight with landings at a minimum of three points and one segment of the flight consisting of a straight–line distance of more that 50 nautical miles between the takeoff and landing locations.

COMPLETION STANDARD: The lesson includes the cross-country sub-stage check, and culminates with the student's long solo cross-country.

FS2, L4, UNIT 1: (2.0 DUAL) NIGHT CROSS-COUNTRY

Preflight Preparation	F+
Ground Operations	F+
Normal Takeoff	F+
Short-field Takeoff	
Soft-field Takeoff	
Departure	F+
Steep Turns	
Slow Flight	
Power-off Stalls	
Power-on Stalls	
Ground Reference Maneuvers	
Enroute Descent	F+
Straight-In Approach	F
Traffic Pattern	F+
Normal Landing	F+
Short-field Landing	
Soft-field Landing	
Slip to Land / No-Flap Land	
Night Operations	F+
Engine-out Procedures	F
Engine-out Landing	F
Basic Instrument Maneuvers	F+
Touch-and-Go	F
Go-Around	F
Communication	F+
Pilotage/Dead Reckoning	F+
Use of Navigation Systems	F+
Diversion	F
Checklist Procedures	F+
Risk Management / Decision Making	F+
Task Management	F+
Situational Awareness	F+
Emergency Procedures	F+
General Knowledge	F+
Basic Aircraft Control	F+
Special Syllabus Requirements	NG+

FS2, L4, UNIT 2: (2.0 DUAL) CROSS-COUNTRY REVIEW

Preflight Preparation	G+
Ground Operations	G+
Normal Takeoff	F
Short-field Takeoff	F+
Soft-field Takeoff	F+
Departure	G+
Steep Turns	
Slow Flight	
Power-off Stalls	
Power-on Stalls	
Ground Reference Maneuvers	
Enroute Descent	G+
Straight-In Approach	F
Traffic Pattern	G
Normal Landing	F
Short-field Landing	F+
Soft-field Landing	F+
Slip to Land / No-Flap Land	F
Night Operations	
Engine-out Procedures	F
Engine-out Landing	F
Basic Instrument Maneuvers	F+
Touch-and-Go	F
Go-Around	F
Communication	G+
Pilotage/Dead Reckoning	G+
Use of Navigation Systems	G+
Diversion	G+
Checklist Procedures	G+
Risk Management / Decision Making	F+
Task Management	F+
Situational Awareness	F+
Emergency Procedures	F+
General Knowledge	F+
Basic Aircraft Control	F+
Special Syllabus Requirements	NG+

FS2, L4, UNIT 3: (1.0 ORAL) CROSS-COUNTRY STAGE CHECK

Preflight Preparation	
Ground Operations	
Normal Takeoff	
Short-field Takeoff	
Soft-field Takeoff	
Departure	
Steep Turns	
Slow Flight	
Power-off Stalls	
Power-on Stalls	
Ground Reference Maneuvers	
Enroute Descent	
Straight-In Approach	
Traffic Pattern	
Normal Landing	
Short-field Landing	
Soft-field Landing	
Slip to Land / No-Flap Land	
Night Operations	
Engine-out Procedures	
Engine-out Landing	
Basic Instrument Maneuvers	
Touch-and-Go	
Go-Around	
Communication	
Pilotage/Dead Reckoning	
Use of Navigation Systems	
Diversion	
Checklist Procedures	
Risk Management / Decision Making	
Task Management	
Situational Awareness	
Emergency Procedures	F+
General Knowledge	F+
Basic Aircraft Control	
Special Syllabus Requirements	NG+

FS2, L4, UNIT 4: (1.5 DUAL) CROSS-COUNTRY STAGE CHECK

Preflight Preparation	G+
Ground Operations	G+
Normal Takeoff	F+
Short-field Takeoff	
Soft-field Takeoff	
Departure	G+
Steep Turns	
Slow Flight	
Power-off Stalls	
Power-on Stalls	
Ground Reference Maneuvers	
Enroute Descent	G+
Straight-In Approach	F
Traffic Pattern	G
Normal Landing	F+
Short-field Landing	
Soft-field Landing	
Slip to Land / No-Flap Land	
Night Operations	
Engine-out Procedures	
Engine-out Landing	
Basic Instrument Maneuvers	F+
Touch-and-Go	F
Go-Around	F
Communication	G+
Pilotage/Dead Reckoning	G+
Use of Navigation Systems	G+
Diversion	G+
Checklist Procedures	G+
Risk Management / Decision Making	F+
Task Management	F+
Situational Awareness	F+
Emergency Procedures	F+
General Knowledge	F+
Basic Aircraft Control	F+
Special Syllabus Requirements	NG+

FS2, L4, UNIT 5: (2.0 SOLO) SOLO CROSS-COUNTRY

Preflight Preparation	G+
Ground Operations	NG+
Normal Takeoff	NG
Short-field Takeoff	NG
Soft-field Takeoff	NG
Departure	NG+
Steep Turns	
Slow Flight	
Power-off Stalls	
Power-on Stalls	
Ground Reference Maneuvers	
Enroute Descent	NG+
Straight-In Approach	NG
Traffic Pattern	NG
Normal Landing	NG
Short-field Landing	NG
Soft-field Landing	NG
Slip to Land / No-Flap Land	NG
Night Operations	
Engine-out Procedures	
Engine-out Landing	
Basic Instrument Maneuvers	
Touch-and-Go	NG
Go-Around	NG
Communication	NG+
Pilotage/Dead Reckoning	NG+
Use of Navigation Systems	NG+
Diversion	
Checklist Procedures	NG+
Risk Management / Decision Making	NG+
Task Management	NG+
Situational Awareness	NG+
Emergency Procedures	
General Knowledge	NG+
Basic Aircraft Control	NG+
Special Syllabus Requirements	NG+

FS2, L4, UNIT 6: (2.5 SOLO) LONG SOLO CROSS-COUNTRY

Preflight Preparation	G+
Ground Operations	NG+
Normal Takeoff	NG
Short-field Takeoff	NG
Soft-field Takeoff	NG
Departure	NG+
Steep Turns	
Slow Flight	
Power-off Stalls	
Power-on Stalls	
Ground Reference Maneuvers	
Enroute Descent	NG+
Straight-In Approach	NG
Traffic Pattern	NG
Normal Landing	NG
Short-field Landing	NG
Soft-field Landing	NG
Slip to Land / No-Flap Land	NG
Night Operations	
Engine-out Procedures	
Engine-out Landing	
Basic Instrument Maneuvers	
Touch-and-Go	NG
Go-Around	NG
Communication	NG+
Pilotage/Dead Reckoning	NG+
Use of Navigation Systems	NG+
Diversion	
Checklist Procedures	NG+
Risk Management / Decision Making	NG+
Task Management	NG+
Situational Awareness	NG+
Emergency Procedures	
General Knowledge	NG+
Basic Aircraft Control	NG+
Special Syllabus Requirements	NG+

FLIGHT STAGE 2, LESSON 5: PRACTICAL TEST PREPARATION

OBJECTIVES: This lesson provides the instructor an opportunity to review all of the procedures and maneuvers previously learned and to brief the student prior to the final flight check. Emphasis will be placed on a thorough review of the student's performance to date and identification of any areas where the student has performed below standards or where the student appears unsure of the correct procedures.

CONTENTS/SPECIAL SYLLABUS:

1. Review student performance to date
2. Private pilot final stage check requirements
3. Private Pilot Airman Certification Standards
4. Basic private pilot maneuvers
5. Navigation
    a. Cross-country procedures
    b. Radio communications
    c. Use of navigation systems/facilities
    d. Radar services
6. Emergency procedures, including flight by reference to instruments
7. Instructor will demonstrate emergency descent during the first dual unit. Student will perform emergency descent on each subsequent sortie of this lesson.
8. Airworthiness
    a. Airworthiness, Registration, Type Certificate, and Operational Limitations
9. Review maintenance inspections
    a. 100-hour inspections/Annual inspections
    b. Airworthiness Directives
    c. Equipment inspections
    d. Emergency Locator Transmitter/Transponder/static inspection
10. Identification and review of those areas found deficient on the Knowledge Test
11. Begin 8710/IACRA familiarization

COMPLETION STANDARDS: This lesson is complete when the student demonstrates the knowledge level and pilot proficiency required of a Private Pilot. Performance will be evaluated against the Private Pilot Airman Certification Standards. Consideration will be given to the student's judgment, situational awareness, coordination, and smoothness. Unsatisfactory performance of any required knowledge area or maneuver constitutes failure. Upon successful completion of this stage, the student will be graduated from the Private Pilot Course and will receive school affiliation and course association in the Integrated Airman Certification and Rating Application (IACRA).

FS2, L5, UNIT 1: (1.0 HOUR ORAL) PRIVATE PILOT REVIEW

Preflight Preparation	
Ground Operations	
Normal Takeoff	
Short-field Takeoff	
Soft-field Takeoff	
Departure	
Steep Turns	
Slow Flight	
Power-off Stalls	
Power-on Stalls	
Ground Reference Maneuvers	
Enroute Descent	
Straight-In Approach	
Traffic Pattern	
Normal Landing	
Short-field Landing	
Soft-field Landing	
Slip to Land / No-Flap Land	
Night Operations	
Engine-out Procedures	
Engine-out Landing	
Basic Instrument Maneuvers	
Touch-and-Go	
Go-Around	
Communication	
Pilotage/Dead Reckoning	
Use of Navigation Systems	
Diversion	
Checklist Procedures	
Risk Management / Decision Making	
Task Management	
Situational Awareness	
Emergency Procedures	G+
General Knowledge	G+
Basic Aircraft Control	
Special Syllabus Requirements	NG+

FS2, L5, UNIT 2: (1.5 HOUR DUAL) PRIVATE PILOT REVIEW FLIGHT

Preflight Preparation	G+
Ground Operations	G+
Normal Takeoff	G
Short-field Takeoff	F
Soft-field Takeoff	F
Departure	G+
Steep Turns	G
Slow Flight	G
Power-off Stalls	G
Power-on Stalls	G
Ground Reference Maneuvers	G
Enroute Descent	G+
Straight-In Approach	G
Traffic Pattern	G
Normal Landing	G
Short-field Landing	F
Soft-field Landing	F
Slip to Land / No-Flap Land	G
Night Operations	
Engine-out Procedures	G
Engine-out Landing	G
Basic Instrument Maneuvers	G+
Touch-and-Go	G
Go-Around	G
Communication	G+
Pilotage/Dead Reckoning	G
Use of Navigation Systems	G
Diversion	G
Checklist Procedures	G+
Risk Management / Decision Making	G+
Task Management	G+
Situational Awareness	G+
Emergency Procedures	G+
General Knowledge	G+
Basic Aircraft Control	G+
Special Syllabus Requirements	NG+

FS2, L5, UNIT 3: (1.5 HOUR DUAL) PRIVATE PILOT REVIEW FLIGHT

Preflight Preparation	G+
Ground Operations	G+
Normal Takeoff	G
Short-field Takeoff	F
Soft-field Takeoff	F
Departure	G+
Steep Turns	G
Slow Flight	G
Power-off Stalls	G
Power-on Stalls	G
Ground Reference Maneuvers	G
Enroute Descent	G+
Straight-In Approach	G
Traffic Pattern	G
Normal Landing	G
Short-field Landing	F
Soft-field Landing	F
Slip to Land / No-Flap Land	G
Night Operations	
Engine-out Procedures	G
Engine-out Landing	G
Basic Instrument Maneuvers	G+
Touch-and-Go	G
Go-Around	G
Communication	G+
Pilotage/Dead Reckoning	G
Use of Navigation Systems	G
Diversion	G
Checklist Procedures	G+
Risk Management / Decision Making	G+
Task Management	G+
Situational Awareness	G+
Emergency Procedures	G+
General Knowledge	G+
Basic Aircraft Control	G+
Special Syllabus Requirements	NG+

FS2, L5, UNIT 4: (1.5 HOUR DUAL) PRIVATE PILOT REVIEW FLIGHT

Preflight Preparation	G+
Ground Operations	G+
Normal Takeoff	G
Short-field Takeoff	G+
Soft-field Takeoff	G+
Departure	G+
Steep Turns	G+
Slow Flight	G+
Power-off Stalls	G+
Power-on Stalls	G+
Ground Reference Maneuvers	G+
Enroute Descent	G+
Straight-In Approach	G
Traffic Pattern	G+
Normal Landing	G
Short-field Landing	G+
Soft-field Landing	G+
Slip to Land / No-Flap Land	G+
Night Operations	
Engine-out Procedures	G+
Engine-out Landing	G+
Basic Instrument Maneuvers	G+
Touch-and-Go	G
Go-Around	G
Communication	G+
Pilotage/Dead Reckoning	G+
Use of Navigation Systems	G+
Diversion	G+
Checklist Procedures	G+
Risk Management / Decision Making	G+
Task Management	G+
Situational Awareness	G+
Emergency Procedures	G+
General Knowledge	G+
Basic Aircraft Control	G+
Special Syllabus Requirements	NG+

FS2, L5, UNIT 5: (1.5 HOUR ORAL) FINAL STAGE CHECK

Preflight Preparation	
Ground Operations	
Normal Takeoff	
Short-field Takeoff	
Soft-field Takeoff	
Departure	
Steep Turns	
Slow Flight	
Power-off Stalls	
Power-on Stalls	
Ground Reference Maneuvers	
Enroute Descent	
Straight-In Approach	
Traffic Pattern	
Normal Landing	
Short-field Landing	
Soft-field Landing	
Slip to Land / No-Flap Land	
Night Operations	
Engine-out Procedures	
Engine-out Landing	
Basic Instrument Maneuvers	
Touch-and-Go	
Go-Around	
Communication	
Pilotage/Dead Reckoning	
Use of Navigation Systems	
Diversion	
Checklist Procedures	
Risk Management / Decision Making	
Task Management	
Situational Awareness	
Emergency Procedures	G+
General Knowledge	G+
Basic Aircraft Control	
Special Syllabus Requirements	

FS2, L5, UNIT 6: (1.5 HOUR DUAL) FINAL STAGE CHECK

Preflight Preparation	G+
Ground Operations	G+
Normal Takeoff	G+
Short-field Takeoff	G+
Soft-field Takeoff	G+
Departure	G+
Steep Turns	G+
Slow Flight	G+
Power-off Stalls	G+
Power-on Stalls	G+
Ground Reference Maneuvers	G+
Enroute Descent	G+
Straight-In Approach	G
Traffic Pattern	G+
Normal Landing	G+
Short-field Landing	G+
Soft-field Landing	G+
Slip to Land / No-Flap Land	G+
Night Operations	
Engine-out Procedures	G+
Engine-out Landing	G+
Basic Instrument Maneuvers	G+
Touch-and-Go	G
Go-Around	G+
Communication	G+
Pilotage/Dead Reckoning	G+
Use of Navigation Systems	G+
Diversion	G
Checklist Procedures	G+
Risk Management / Decision Making	G+
Task Management	G+
Situational Awareness	G+
Emergency Procedures	G+
General Knowledge	G+
Basic Aircraft Control	G+
Special Syllabus Requirements	

FS2, L5, UNIT 7: (1.0 HOUR ORAL) FINAL GROUND REVIEW

Preflight Preparation	
Ground Operations	
Normal Takeoff	
Short-field Takeoff	
Soft-field Takeoff	
Departure	
Steep Turns	
Slow Flight	
Power-off Stalls	
Power-on Stalls	
Ground Reference Maneuvers	
Enroute Descent	
Straight-In Approach	
Traffic Pattern	
Normal Landing	
Short-field Landing	
Soft-field Landing	
Slip to Land / No-Flap Land	
Night Operations	
Engine-out Procedures	
Engine-out Landing	
Basic Instrument Maneuvers	
Touch-and-Go	
Go-Around	
Communication	
Pilotage/Dead Reckoning	
Use of Navigation Systems	
Diversion	
Checklist Procedures	
Risk Management / Decision Making	
Task Management	
Situational Awareness	
Emergency Procedures	
General Knowledge	G+
Basic Aircraft Control	
Special Syllabus Requirements	NG+

FS2, L5, UNIT 8: (1.0 HOUR DUAL) FINAL REVIEW FLIGHT

Preflight Preparation	G
Ground Operations	G
Normal Takeoff	G
Short-field Takeoff	G
Soft-field Takeoff	G
Departure	G
Steep Turns	G
Slow Flight	G
Power-off Stalls	G
Power-on Stalls	G
Ground Reference Maneuvers	G
Enroute Descent	G
Straight-In Approach	G
Traffic Pattern	G
Normal Landing	G
Short-field Landing	G
Soft-field Landing	G
Slip to Land / No-Flap Land	G
Night Operations	
Engine-out Procedures	G
Engine-out Landing	G
Basic Instrument Maneuvers	G
Touch-and-Go	G
Go-Around	G
Communication	G
Pilotage/Dead Reckoning	G
Use of Navigation Systems	G
Diversion	G
Checklist Procedures	G
Risk Management / Decision Making	G
Task Management	G
Situational Awareness	G
Emergency Procedures	G
General Knowledge	G
Basic Aircraft Control	G
Special Syllabus Requirements	