

## AT-14502 PRIVATE PILOT FLIGHT

The objective of the Private Pilot Flight Course is for the student to earn the Private Pilot Certificate. The course consists of two stages. Stage one prepares the student for flight. In stage two, the student completes the cross country flights and reviews for the Private Pilot certification flight test. All lessons in the stage must be complete prior to the stage check. The course culminates in the Private Pilot Practical Test.

The course consists of the following minimum flight times:

Total Time.....	50 Hours
Dual Instruction.....	38 Hours
Night Dual.....	3 Hours
Dual Cross-Country .....	5 Hours
Solo .....	10 Hours
Solo Cross-Country.....	5 Hours
Simulated Instrument .....	3 Hours
Flight or Aviation Training Device .....	2.4 hours
Discussion .....	20 Hours

Ideally, the discussion lessons should be done when weather does not permit flying and must be completed prior to the appropriate stage check. Discussion Lesson 1 must be completed before the first flight lesson. With the exception of Discussion Lesson 8, all discussion lessons should last at least 0.8 hours.

Other than cross countries, or unless otherwise specified, all flight lessons should be at minimum 1.1 hours. The instructor should pace themselves accordingly to meet the required total time for the course.

A mini course outline for the three sessions in the Cirrus Flight Training Devices or Frasca Aviation Training Devices follows this overview.

The goal of each instructor is to have the student pilot ready for the Private Pilot Flight Test at 49 hours total time. It is recognized, however, that students learn at different rates. Safety should never be compromised. Additional hours should be flown, if needed, to adequately prepare the student to become a Private Pilot.

It is required that each part-time flight instructor maintain a close relationship with the full-time faculty in order to closely monitor the progress of each student.

**All AT-14502 students are required to attend scheduled safety meetings. The meetings are held beginning the first Wednesday of each semester. Meetings will be held either on-line or in person. Attendance at these meetings and quiz grades are used to calculate the student's "aeronautical knowledge" portion of their course grade.**

## **AT-145 GROUND TRAINER SUPPLEMENT**

All AT 145 students are required to have a minimum of three sessions of a minimum of 0.8 hours each in the Cirrus Flight Training Devices. If a Cirrus Flight Training Device is not available, a Frasca Aviation Training Device can be substituted. All of the sessions should be completed prior to the Stage One Stage Check. Students are not limited to three sessions.

### **GROUND TRAINER LESSON ONE**

- a. Straight and level flight
- b. 15° banked turns to headings
- c. Constant airspeed climbs and descents
- d. Climbing and descending turns
- e. CAPS demonstration (*discussion item only, if lesson is done in the Frasca*)

### **GROUND TRAINER LESSON TWO**

- a. Straight and level flight
- b. 15° banked and standard rate turns to headings
- c. Constant airspeed climbs and descents
- d. Climbing and descending turns
- e. Unusual attitudes

### **GROUND TRAINER LESSON THREE**

- a. VOR orientation
- b. Tracking to and from BVT VOR
- c. VOR position fix procedures
- d. CAPS deployment (*discussion item only, if lesson is done in the Frasca*)

## Stage One

**DISCUSSION LESSON 1 OBJECTIVE:** The student will become familiar with the course objectives, school rules, cockpit orientation, and the aircraft preflight. All required paperwork and documentation must be submitted to Hangar 6 staff prior to beginning flight training.

**CONTENT:**

- A. Discussion of course outline & course objectives (including the grading form), materials, and school rules relating to aircraft operation (including dispatch and lottery procedures) and student conduct in flight courses (including attendance expectations).
- B. Explain the required AT Safety Meetings and ensure the student understands that the meetings are mandatory. The schedule of meeting dates and times will be provided by Hangar 6 staff.
- C. Explain the weekly quiz requirement.
- D. Explanation of cockpit instruments and controls.
- E. Demonstration of the preflight using the checklist, including how to determine aircraft legality for flight.
- F. Explanation of four forces and four fundamentals, and basic aerodynamics
- G. Show the location of oil, windshield cleaning materials, and fire extinguishers.
- H. Ensure that the student pilot and medical certificate has not expired.

**COMPLETION REQUIREMENTS:** At the end of this lesson, the student will be able to use the checklist to perform a preflight. The student will also be able to describe the four forces and the four fundamentals.

**DISCUSSION LESSON 2 OBJECTIVE:** The student will become familiar with Cirrus systems.

**CONTENT:**

- A. Discussion and location of aircraft certificates and operating limitations.
- B. Review of the aircraft maintenance records, including a discussion of inspections, transponder/encoder/static system/altimeter checks, ELT battery check, and airworthiness directives.
- C. Aircraft systems including flight controls and trim, flaps, engine and propeller, landing gear, fuel system, electrical system, AHRs, pitot static system including alternate static system and ADC, heating and ventilation system, and avionics.
- D. Discussion of inoperative components (FAR 91.213) and airworthiness requirements.

**COMPLETION REQUIREMENTS:** This lesson is complete when the instructor determines the student has the proper knowledge of Cirrus systems, inspections, and airworthiness requirements.

**DISCUSSION LESSON 3 OBJECTIVE:** The student will become familiar with aircraft performance charts and weight and balance.

**CONTENT:**

- A. Computation of pressure altitude
- B. Proper use of all Cirrus performance charts

- C. Cirrus weight and balance computations
- D. Effects of atmospheric conditions on the airplane's performance
- E. Effects of CG location on aircraft performance and handling

**COMPLETION REQUIREMENTS:** This lesson is complete when the student demonstrates proficient use of Cirrus performance charts and weight and balance calculations.

**DISCUSSION LESSON 4 OBJECTIVE:** The student will become familiar with Cirrus emergency procedures, systems and equipment malfunctions, emergency equipment and survival gear, CAPS deployment, and spin awareness (with and without CAPS).

**CONTENT:**

- A. Review of all emergency procedures in Section 3 of the Cirrus manual, including emergency descent, emergency approach and landing, and systems and equipment malfunctions.
- B. Review of all emergency equipment and survival gear.
- C. CAPS operation (reference the CAPS description of the Aircraft Operations Section of the Safety and Procedures Manual).
- D. Spin awareness:
  - a. Aerodynamic factors related to spins.
  - b. Flight situations where unintentional spins may occur.
  - c. Procedures for recovery from unintentional spins, with and without CAPS.

**COMPLETION REQUIREMENTS:** This lesson is complete when the instructor determines that the student meets all of the requirements for the above material set forth in the Private Pilot Practical Test Standards.

**DISCUSSION LESSON 5 OBJECTIVE:** To familiarize the student with sectional charts and the National Airspace System.

**CONTENT:**

- A. Discussion of all sectional chart symbols.
- B. Explanation of airspace including Class A, B, C, D, E and G airspaces, military operating areas, prohibited/restricted/warning/alert areas, national security areas, military training routes, temporary flight restrictions, and airports where Class E airspace extends to the surface.
- C. Minimum weather requirements, including blue and magenta shading, VFR and special VFR weather requirements to takeoff and land, and minimum VFR weather requirements above 10,000 feet.

**COMPLETION REQUIREMENTS:** This lesson is complete when the instructor determines that the student meets all of the requirements for the above material set forth in the Private Pilot Practical Test Standards.

**DISCUSSION LESSON 6 OBJECTIVE:** To familiarize the student with medical certificates, FARs related to aeromedical factors, as well as the symptoms, effects, and corrective actions for the listed aeromedical factors:

**CONTENT:**

- A. Explanation of medical certificate classes, duration, and procedures for obtaining a certificate with a possible medical deficiency.
- B. Hypoxia-day and night.
- C. Hyperventilation.
- D. Middle ear and sinus problems.
- E. Spatial disorientation.
- F. Motion sickness.
- G. Carbon monoxide poisoning.
- H. Stress and fatigue.
- I. Dehydration.
- J. The effects of alcohol, drugs, and over-the counter medications including applicable FARs.
- K. Nitrogen excesses during scuba dives.

**COMPLETION REQUIREMENTS:** This lesson is complete when the instructor determines that the student meets all of the requirements for the above material set forth in the Private Pilot Practical Test Standards.

**DISCUSSION LESSON 7 OBJECTIVE:** To familiarize the student with the procurement and use of aeronautical weather reports, forecasts, charts, and the NOTAM system. *It is expected that the student and instructor will become familiar with the following subject matter before and during each flight. This discussion lesson will serve as a means to verify that the student has retained all of the information discussed throughout the semester.*

**CONTENT:**

- A. METAR, TAF, and FA.
- B. Surface analysis chart.
- C. Radar summary chart.
- D. Winds and temperature aloft chart.
- E. Significant weather prognostic charts.
- F. Convective outlook chart.
- G. AWOS, ASOS, and ATIS reports.
- H. SIGMETs and AIRMETS.
- I. PIREPs.
- J. Wind shear reports.
- K. Icing and freezing level information.
- L. NOTAM system: Notams, FDC Notams, Temporary Flight Restrictions.

**COMPLETION REQUIREMENTS:** This lesson is complete when the instructor determines that the student meets all of the requirements for the above material set forth in the Private Pilot Practical Test Standards and is competent to make a “go/no-go” decision based on available weather information.

**DISCUSSION LESSON 8 OBJECTIVE:** The student will pass the pre-solo written exam.

NOTE: This lesson has to be completed prior to Flight Lesson 8

**CONTENT:**

- A. The student will take the pre-solo written exam.
- B. The instructor will grade the exam and discuss any incorrect answers with the student.
- C. The instructor will record the exam grade in the student's logbook.

**COMPLETION REQUIREMENTS:** The student must pass the pre-solo written exam with a minimum grade of 70%..

**DISCUSSION LESSON 9 OBJECTIVE:** The student will learn the proper procedures for planning and executing a cross country flight.

**CONTENT:**

- A. The FAA definition of cross country flight and the cross country requirements for the Private Pilot Certificate.
- B. The selection and use of aeronautical charts, pilotage, and elementary dead reckoning using the magnetic compass, including identification of airspace, obstructions, and terrain features.
- C. Completion of the Purdue University Flight Navigation Log, including computation of headings, flight time, and fuel requirements.
- D. Use of plotter.
- E. Altitude selection.
- F. Use of flight computer.
- G. Use of performance charts to determine power settings, fuel consumption and range, and true airspeed.
- H. Use of Airport/Facility Directory, NOTAMs, and AIM.
- I. Weight and balance computations.
- J. Proper fuel management procedures.
- K. Controlled and uncontrolled airport procedures.
- L. Filing, activating, and canceling a VFR flight plan.
- M. Purdue rules and proper endorsements relating to solo X-C.
- N. Use of transponder.
- O. The use of radio for VFR navigation, and for two-way communication, including VOR orientation, GPS operation, and utilization of radar services.
- P. Recognition of critical weather situations- low level wind shear, estimating visibility while in flight, and the procurement and use of aeronautical weather reports and forecasts.
- Q. Possible reasons and procedures for diverting to an alternate airport.
- R. Lost procedures.
- S. Purdue procedures for solo cross countries
  - a. A completed Purdue Flight Navigation Log for all flights
  - b. A logbook endorsement for each flight (even after the Private Pilot Checkride)

**COMPLETION REQUIREMENTS:** At the end of this lesson, the student should be able to plan

a cross country flight with a minimum of assistance from the instructor and have a working knowledge of the other areas listed in the content portion of this lesson.

**DISCUSSION LESSON 10 OBJECTIVE:** The student will pass the pre-solo cross country written exam.

NOTE: This lesson must be completed prior to Flight Lesson 19.

CONTENT:

- A. The student will take the pre-solo cross country written exam.
- B. The instructor will grade the exam and discuss any incorrect answers with the student.
- C. The instructor will record the exam grade in the student's logbook.

COMPLETION REQUIREMENTS: The student must pass the pre-solo cross country written exam with a minimum grade of 70%.

**DISCUSSION LESSON 11 OBJECTIVE:** To teach the student the elements of runway incursion avoidance.

CONTENT:

- A. Definition of runway incursion.
- B. Methods for avoiding runway incursions, including strategies in the following categories:
  - a. Planning.
  - b. Situational Awareness.
  - c. Written Taxi Instructions.
  - d. Pilot/Passenger Communications.
  - e. ATC/Pilot Communication.
  - f. Taxiing.
  - g. Exterior Lighting.
  - h. Tools & Equipment (taxi diagram, moving map displays, IR camera, runway status lights etc.)
- C. Procedures related to runway incursion avoidance unique to night operations, non-towered airports, and low visibility operations.
- D. Review of the most current revision of Advisory Circular 91-73.

COMPLETION REQUIREMENTS: This lesson is complete when the instructor determines that the student meets all of the requirements for the above material set forth in the Private Pilot Practical Test Standards.

**DISCUSSION LESSON 12 OBJECTIVE:** To teach the student the elements of single-pilot resource management (SRM) and cockpit management.

CONTENT:

- A. Aeronautical decision-making.
- B. Risk management.

- C. Task management, including checklist usage.
- D. Situational awareness.
- E. Controlled flight into terrain awareness.
- F. Automation management.
- G. Cockpit management.

**COMPLETION REQUIREMENTS:** This lesson is complete when the instructor determines that the student meets all of the requirements for the above material set forth in the Private Pilot Practical Test Standards (including information in the Introduction).

**DISCUSSION LESSON 13 OBJECTIVE:** To teach the student the elements related to night operations.

**NOTE:** This lesson must be completed prior to Flight Lesson 12.

**CONTENT:**

- A. Medical factors related to night flying.
- B. Visual illusions related to night flying, specifically somatogravic and black hole approach illusions.
- C. Aircraft and airport lighting requirements and operation.
- D. Personal equipment essential for night flight.
- E. Night orientation, navigation, and chart reading techniques.
- F. Safety precautions and emergencies unique to night flying.

**COMPLETION REQUIREMENTS:** This lesson is complete when the instructor determines that the student meets all of the requirements for the above material set forth in the Private Pilot Practical Test Standards.

**FLIGHT LESSON 1 DUAL OBJECTIVE:** The first flight will acquaint the student with ground operations of the aircraft and the four flight fundamentals. Flight time should be at least 0.8 hours.

**NOTE:** For the first 6 flight lessons, the engine page should be selected on the MFD while in flight. The student should begin to learn to use a sectional chart for navigation without the use of the GPS.

**CONTENT:**

- A. Proper checklist usage
- B. Engine start
- C. Radio setup and communication procedures
- D. Normal taxi procedures
- E. Engine run-up and pre-takeoff check
- F. Straight and level
- G. Turns – shallow and medium bank
- H. Climbs
- I. Descents



- J. Return to airport – ATIS, checklist, communicate
- K. Traffic pattern
- L. Preflight
- M. Emphasize collision avoidance
- N. Parking and securing the airplane

**COMPLETION REQUIREMENTS:** The student should demonstrate a knowledge of the controls and systems, and the importance of checking their operation before each flight. The student will perform the four fundamentals, taxiing, and radio usage with verbal assistance from the instructor.

**FLIGHT LESSON 2 DUAL OBJECTIVE:** To review previously learned maneuvers and introduce traffic patterns, slow flight, and navigation in the practice area.

**NOTE:** For the first 6 flight lessons, the engine page should be selected on the MFD while in flight. The student should begin to learn to use a sectional chart for navigation without the use of the GPS.

**CONTENT:**

- A. Preflight
- B. Proper checklist usage
- C. Engine start
- D. Taxi
- E. Engine run-up
- F. Takeoff
- G. Four fundamentals: practice using the standby instruments as well as the PFD
  - a. Straight and level
  - b. Turns to headings – shallow and medium bank
  - c. Climbs
  - d. Descents
- H. Slow flight at 80 KIAS with full flaps
- I. Return to airport by use of sectional chart and local landmarks
- J. Traffic pattern
- K. Landing
- L. Emphasize collision avoidance

**COMPLETION REQUIREMENTS:** The student will be able to accurately perform a preflight inspection, engine start, taxi, engine run-up, and basic radio communications, with verbal assistance from the instructor. Altitude on all flight maneuvers will be within  $\pm 200$  feet and heading within  $\pm 25^\circ$ . The student should be aware of the approximate heading to the airport.

**FLIGHT LESSON 3 DUAL OBJECTIVE:** To review previously introduced maneuvers and introduce slow flight at minimum controllable airspeed, power-off stalls, and recovery.

**NOTE:** For the first 6 flight lessons, the engine page should be selected on the MFD while in flight. The student should learn to use a sectional chart for navigation without the use of the GPS.

NOTE: Proper preflight, checklist usage, communication procedures, start, taxi, and run-up will be accomplished each flight and will no longer be listed under “content.”

CONTENT:

- A. Takeoff
- B. Review straight and level, turns, climbs, descents
- C. Slow flight at minimum controllable airspeed with full flaps
- D. Power off stalls in the landing configuration, imminent and full
- E. Sectional chart navigation
- F. Return to airport
- G. Traffic pattern
- H. Landing

COMPLETION REQUIREMENTS: The student will be able to perform slow flight at minimum controllable airspeed within  $\pm 300$  feet altitude and  $\pm 25^\circ$  heading, recognize and recover from power-off stalls, and perform the four fundamentals  $\pm 150$  feet and  $\pm 15^\circ$  heading. The student should recognize prominent landmarks seen previously and know direction to the airport. The student will know normal takeoff procedures.

**FLIGHT LESSON 4 DUAL OBJECTIVE:** To introduce basic attitude instrument flying and stalls from critical flight situations.

NOTE: For the first 6 flight lessons, the engine page should be selected on the MFD while in flight. The student should use a sectional chart for navigation without the use of the GPS.

CONTENT:

- A. Normal takeoff
- B. Straight and level, turns, climbs, descents
- C. Slow flight at minimum controllable airspeed with full flaps
- D. Power off stalls in landing configuration, imminent and full
- E. Power on departure stalls, imminent and full
- F. Power on takeoff stalls, imminent and full
- G. Simulated instrument flying, straight and level, turns, climbs and descents, approximately 0.3 hours
- H. Return to airport/local navigation
- I. Traffic pattern
- J. Landing

COMPLETION REQUIREMENTS: The student will perform stalls from critical situations with verbal assistance from the instructor. During instrument flight, the student will control the airplane within  $\pm 300$  feet altitude and  $\pm 30^\circ$  heading. The student should know the direction to the airport and recognize previously seen prominent local landmarks.

**FLIGHT LESSON 5 DUAL OBJECTIVE:** To review previously introduced maneuvers and introduce ground reference maneuvers, slips, and emergencies.

NOTE: For the first 6 flight lessons, the engine page should be selected on the MFD while in flight. The student should use a sectional chart for navigation without the use of the GPS.

CONTENT:

- A. Discussion of spins
  - a. Situations that could lead to spins
  - b. Recovery technique
- B. Normal takeoff
- C. Slow flight with emphasis on altitude and heading control during airspeed transitions
- D. Stalls, imminent and full, from critical situations (landing, takeoff, and departure)
- E. Tracking along a road
- F. Slips and slipping technique to track over a road
- G. Rectangular courses
- H. Emergency procedures
  - a. Engine failure
  - b. Electrical system malfunctions
  - c. Radio malfunctions
- I. Return to airport/local navigation
- J. Traffic pattern
- K. Landing

COMPLETION REQUIREMENTS: The student will hold altitude on ground reference maneuvers  $\pm 300$  feet. Slips will be performed with a stabilized attitude. The student should know the direction and approximate distance to the airport, be able to recognize and recover from stalls, and maintain directional control during taxi and takeoff. The student will know the procedures for the listed emergencies.

**FLIGHT LESSON 6 DUAL OBJECTIVE:** Previously introduced maneuvers will be practiced. The instructor will show the student the demonstration stalls and a normal landing will be introduced.

NOTE: For the first 6 flight lessons, the engine page should be selected on the MFD while in flight. The student should learn to use a sectional chart for navigation.

CONTENT:

- A. Normal takeoff
- B. Slow flight in various speeds and configurations
- C. Approach to landing, takeoff, and departure stalls, imminent and full
- D. Instructor will demonstrate only – elevator trim, secondary, accelerated, and cross control stalls
- E. Simulated engine failure
- F. Ground reference maneuvers
- G. Local area navigation
- H. Traffic patterns
- I. Slips

## J. Normal Landing

**COMPLETION REQUIREMENTS:** The student should be able to maintain directional control on takeoff, depart the pattern, perform stalls and recoveries, and slow flight with a minimum of assistance from the instructor. The student should also demonstrate proper procedures for emergencies and know the direction and distance to the airport.

**FLIGHT LESSON 7 DUAL OBJECTIVE:** The student will increase proficiency in takeoffs and landings. This lesson will consist of at least 4.5 hours of total flight time.

**NOTE:** If the surface winds are not conducive for takeoff and landings, it is permissible to proceed with other lessons within Stage One.

### CONTENT:

- A. Normal takeoffs and landings
- B. Crosswind takeoffs and landings
- C. Full flap go-arounds
- D. Wake turbulence avoidance
- E. No flap landing
- F. Slips to a landing
- G. Emergency in the pattern
- H. Aborted or rejected takeoff immediately *prior* to lift off to a full stop
- I. Proper recovery from simulated balloons and bounces
  - a. Balloons and bounces simulated by the instructor
  - b. Student should demonstrate proper recovery techniques
- J. Discussion: Engine failures on takeoff immediately *after* liftoff (proper recovery procedure should be discussed, but this maneuver will not be practiced).

**COMPLETION REQUIREMENTS:** This lesson is complete when the student has accumulated at least 4.5 hours of landing practice and is competent to solo. This includes knowing when crosswind correction, forward slips to landing or go-arounds are needed.

**FLIGHT LESSON 8 DUAL/SOLO OBJECTIVE:** The student will fly solo in the pattern. This flight will be conducted as a “supervised solo” which means that the instructor will fly and complete at least 3 dual landings with the student immediately prior to allowing the student to fly solo.

**NOTE:** Soloing a student for the first time is a tremendous responsibility. The instructor must be absolutely confident that the student is competent for solo flight. The instructor is responsible for ensuring that all endorsements and signoffs are complete as per the FARs. The endorsement and signoff procedures for the initial solo are as follows:

- A) *The pre-solo written exam has been passed (70%) and recorded in the front of the Purdue Flight Record.*
- B) *The Student Pilot Certificate has been properly endorsed for solo.*
- C) *The endorsements for soloing a student in the front of the Purdue Flight Record have*

*been completed.*

***D) The Flight Instructor is to be available for assistance, if needed.***

CONTENT:

- A. Dual review of takeoffs and landings
- B. Dual review of any content in Flight Lesson 8, at the instructor's discretion
- C. Up to three solo takeoffs and landings
  - a. All landings on the FIRST SOLO flight MUST be to a full stop. On Runway 23/5 clear the runway and taxi back. On Runway 28/10, traffic permitting, a stop and go will be permitted. If traffic does not permit a stop and go, clear the runway and taxi back. The student will not accept a Land and Hold Short Clearance.

COMPLETION REQUIREMENTS: This lesson is complete when the student has completed three solo takeoffs and landings.

**FLIGHT LESSON 9 DUAL/SOLO OBJECTIVE:** The student will complete his or her second supervised solo. The instructor will fly with the student immediately prior to allowing the student to fly solo. To complete this lesson the student should have a minimum of 1.5 hours solo, so it may be necessary to fly two "supervised solos" flights in order to complete lesson 9.

CONTENT:

- A. Dual review of takeoffs and landings
- B. Solo takeoffs and landings
  - a. At the instructor's discretion touch and goes can be used for the takeoffs and landings

COMPLETION REQUIREMENTS: This lesson is complete when the student has completed 1.5 hours of solo landing practice.

**FLIGHT LESSON 10 DUAL:** Basic attitude instrument flying will be practiced and recoveries from unusual attitudes and VOR tracking will be introduced. Also, the student will be introduced to short and soft field takeoffs and landings.

CONTENT:

- A. Soft field takeoffs and landings
- B. Short field takeoffs and landings
- C. Basic attitude instrument flying - 0.3 hours
  - a. VOR tracking
  - b. Recovery from unusual attitudes

COMPLETION REQUIREMENTS: The student should understand what types of airport conditions require the use of short and/or soft field procedures, and be able to perform short and soft field takeoffs and landings to the satisfaction of the instructor. The student should also be able to track to BVT VOR (or other VOR in the area if BVT is unavailable) from an unknown position and from BVT to LAF.

**FLIGHT LESSON 11 DUAL OBJECTIVE:** To practice ground reference maneuvers, simulated instrument and introduce new maneuvers.

**CONTENT:**

- A. 45° bank steep turns
- B. Turns around a point
- C. S Turns across a road
- D. Basic attitude instrument flying – 0.3 hours
- E. Emergency Descent
- F. Landing (*type at instructor's discretion*)

**COMPLETION REQUIREMENTS:** This lesson is complete when all listed maneuvers have been flown and the student has an understanding of the principles involved and can perform the maneuvers in such a way as to be recognizable.

**FLIGHT LESSON 12 DUAL NIGHT LOCAL OBJECTIVE:** The student will accomplish his or her first flight at night in the pattern. It is recommended that the student accomplish at least 7 landings to a full stop.

**NOTE:** Discussion lesson 13 must be complete prior to this flight.

**NOTE:** This lesson can be started as soon as Lesson 7 has been started.

**CONTENT:**

- A. Night preflight/ground operations
- B. Night takeoffs and landings
- C. Electrical abnormalities
  - a. Landing light failure
  - b. Cockpit lighting failure – which may require dimming and covering-up the PFD.

**COMPLETION REQUIREMENTS:** The student will be familiar with night flying and will understand the conditions and hazards of flying at night.

**FLIGHT LESSON 13 SOLO OBJECTIVE:** The student will practice the specified maneuvers solo, in the local practice area.

**CONTENT:**

- A. Normal takeoff
- B. Slow flight
- C. Approach to landing stall
- D. Takeoff stall
- E. Departure stall
- F. 45° bank steep turns
- G. S turns across a road
- H. Turns around a point
- I. Normal landing

**COMPLETION REQUIREMENTS:** This lesson is complete when the student has flown the required maneuvers.

**FLIGHT LESSON 14 DUAL SHORT CROSS COUNTRY OBJECTIVE:** The student will be introduced to cross country procedures and uncontrolled airport procedures. The student will plan and fly a dual cross country from LAF-MCX-FKR-CFJ-LAF, LAF-50I-DNV-LAF, or LAF-GGP-5I4-LAF. The route may be flown in reverse. One airport may be omitted if time or conditions prohibit landings at each airport. The student will use pilotage and dead reckoning skills to navigate, not the GPS map display.

NOTE: Discussion lesson 9 is required prior to this flight.

CONTENT:

- A. Use of sectional charts
- B. Weather briefing
- C. Use of navigation log
- D. Computation of TAS and fuel consumption
- E. Weight and balance
- F. Departure and course interception
- G. Pilotage
- H. Dead reckoning
- I. Arrival procedures
- J. Uncontrolled airport procedures

COMPLETION REQUIREMENTS: The student must be able to locate and operate into and out of the airports listed and, with assistance from the instructor, use proper radio and traffic pattern procedures. The lesson is complete when the instructor determines the student is ready for dual cross countries.

**FLIGHT LESSON 15 DUAL CROSS COUNTRY OBJECTIVE:** The student will fly his or her first dual cross country. One of the following routes will be flown: LAF-SBN-VPZ-LAF or LAF-HUF-MTO-LAF. The selected route may be flown in reverse. All landings must be to a full stop (ATC and runway permitting, stop-and-goes can be done). Prior to the flight, the student must complete the Purdue University Navigation Log, receive a standard weather briefing from the Flight Service Station, and file a VFR flight plan. The GPS may be used for navigation.

NOTE: Flight lesson 14 is required prior to this flight.

CONTENT:

- A. Departure and course interception
- B. Activating and closing a VFR flight plan
- C. Power settings and use of mixture control/leaning procedures
- D. Pilotage, dead reckoning, and radio navigation
- E. Use of ground check points for navigation and ground speed computation
- F. Computation of fuel consumption
- G. VFR position reports
- H. Arrival procedures
- I. Crosswind operations

- J. Use of transponder
- K. ETA checks
- L. Use of radar vectors and ATIS

**COMPLETION REQUIREMENTS:** This lesson is complete when the instructor is satisfied with the student's performance.

**FLIGHT LESSON 16 DUAL NIGHT CROSS COUNTRY OBJECTIVE:** This lesson is to introduce night cross country to the student. One of the following routes will be flown: LAF- MZZ-LAF; LAF-IKK-LAF; LAF-MQJ-LAF. The remaining night time will be in the pattern practicing takeoffs and landings. The student must have a minimum of 3.0 hours total night flight and 10 night takeoffs and landings to a full stop at the completion of this lesson (lessons 13 and 16 combined).

**NOTE:** Flight lesson 12 and discussion lesson 9 must be complete prior to this flight.

**NOTE:** This lesson may be completed in Phase II if unable to complete it during Phase I.

**CONTENT:**

- A. Night cross country planning
- B. Night orientation and navigation
- C. Night takeoffs and landings
- D. Night cross country
- E. Night emergency procedures

**COMPLETION REQUIREMENTS:** This lesson is complete when the student has completed the flight to the satisfaction of the instructor. The student must have a minimum of 3.0 hours total night flight and 10 night takeoffs and landings total at the completion of this lesson.

**FLIGHT LESSON 17 DUAL CROSS COUNTRY OBJECTIVE:** During this lesson, the student will review cross country procedures to gain sufficient proficiency to go on solo cross country flights. One of the following routes will be flown: LAF-CMI-IKK-LAF or LAF-FWA-MZZ-LAF. The selected route may be flown in reverse. All landings must be to a full stop (ATC and runway permitting, stop-and-goes can be done). A diversion to an alternate airport will be practiced, although landing at the alternate is not required.

**NOTE:** The GPS will NOT be used for navigation.

**CONTENT:**

- A. Review of all content listed in flight lesson 15.
- B. Diversion to an alternate
- C. Emergency procedures
  - a. Lost procedures
  - b. Imminent fuel exhaustion
  - c. Communications failure
  - d. Cockpit or engine fire
  - e. Adverse weather
  - f. Electrical system malfunction



- g. Partial power loss

**COMPLETION REQUIREMENTS:** The student will execute the cross country flight with only verbal assistance from the instructor, except for the last leg, in which the student must fly with no assistance from the instructor. Ground track must be within 1 NM and altitude must be within 200 feet. All takeoffs and landings, including crosswinds under 10 knots, must be without assistance from the instructor. Radio procedures and emergency procedures must be accomplished in such a manner that a safe and efficient flight will result. The lesson is complete when the instructor determines the student is competent to fly solo cross countries.

**FLIGHT LESSON 18 DUAL OBJECTIVE:** The student will review any previously introduced maneuver in preparation for the Stage One Stage Check. The lesson will include a minimum of 0.2 hours of simulated instrument.

**CONTENT:**

- A. Normal, crosswind, short, and soft field takeoffs
- B. Normal, crosswind, short, and soft field landings
- C. Slow flight
- D. Takeoff, departure, and approach to landing stalls
- E. Steep turns
- F. Basic attitude instrument flying
  - a. Four fundamentals
  - b. Unusual attitudes
  - c. VOR orientation and tracking
- G. Emergency procedures

**COMPLETION REQUIREMENTS:** The lesson is complete when the instructor is satisfied with the student's performance.

**FLIGHT LESSON 19 DUAL OBJECTIVE:** The objective of this lesson is to prepare the student for the Stage One Stage Check. The student will plan a one leg cross country as assigned by the instructor. The flight will start off on the assigned cross country. The student must maintain course without the use of GPS. Once the student satisfactorily demonstrates navigational skills, any of the stage check maneuvers will be practiced, at the discretion of the instructor.

**CONTENT:**

- A. Cross country procedures
- B. Ground speed check
- C. Uncontrolled airport procedures
- D. Diverting to an alternate
- E. Slow flight
- F. Approach to landing stall
- G. Takeoff stall
- H. Departure stall
- I. VOR orientation and tracking
- J. GPS operation

- K. Flight by reference to instruments
  - a. Four fundamentals
  - b. Unusual attitudes
- L. Simulated engine failure
- M. Lost procedures
- N. System malfunction
- O. Emergency descent
- P. Normal/Crosswind takeoffs and landings
- Q. Soft field takeoffs and landings
- R. Short field takeoffs and landings
- S. Full flap go-around

**COMPLETION REQUIREMENTS:** This lesson is complete when the instructor determines the student is prepared for the Stage One Stage Check.

**FLIGHT LESSON 20 DUAL OBJECTIVE:** To pass the Stage One Stage Check.

**CONTENT:**

- A. Preflight briefing
- B. Flight maneuvers and procedures – see the Stage One Stage Check description
- C. Post flight briefing

**COMPLETION REQUIREMENTS:** This lesson is complete when the maneuvers have been demonstrated to the satisfaction of the check pilot.

### **AT 14500 Stage One Stage Check**

The purpose of the AT 14500 Stage One Stage Check is to determine if the student is safe for solo and solo cross country flying. The student must also be able to safely perform short, soft, and crosswind takeoffs and landings.

The student will plan a VFR cross country to either South Bend, Fort Wayne, or Muncie, IN, as assigned by the stage check instructor. All cross country planning, plus weight and balance and performance calculations must be complete as per the Purdue University Navigation Flight Log, prior to beginning the stage check.

The student will begin the cross country without the use of the GPS and will demonstrate the ability to navigate by pilotage and dead reckoning. The student must accomplish a ground speed check and divert to, or towards, an alternate airport.

The student must also demonstrate the ability to takeoff and land, fly at critically slow airspeeds, recover from stalls, navigate by use of radio navigation, fly by reference to instruments, and safely perform simulated emergency operations.

The stage check instructor must use the AT 14500 Stage One Stage Check electronic record keeping system to record the detailed results of the stage check.

### **Stage One Stage Check**

Item	Points Possible	Points Given	Remarks
<b>Oral</b> All tasks are required.			
A. Pilot and aircraft airworthiness	10	10	
B. Solo Privileges and limitations / Purdue rules	10	10	
C. Aircraft Systems / limitations / performance / weight and balance	10	10	
D. Weather	10	10	
E. Cross country planning	10	10	
F. Proper fuel management	10	10	
G. Emergency procedures / light gun signals / spin awareness	10	10	
H. National airspace system / sectional charts	10	10	

<b>Normal Operations</b> All tasks are required			
A. Checklist usage	15	15	
B. Starting / taxiing / runup / shutdown procedures	5	5	
C. Radio procedures	15	15	
D. Traffic pattern and collision avoidance	15	15	

<b>Cross Country Procedures</b> The check instructor will select at least tasks A, C, and E.			
A. Maintaining planned course	20	20	
B. Altitude control	10	10	
C. Ground speed check	10	10	
D. Uncontrolled airport procedures	20	20	
E. Diverting to an alternate	20	20	

<b>Flight at Critically Slow Airspeeds</b> The check pilot will select at least tasks A and B, and one other task			
A. Slow flight	10	10	
B. Approach to landing stall	10	10	
C. Takeoff stall	10	10	
D. Departure stall	10	10	

<b>Radio Navigation</b> The check pilot will select at least one task.			
A. VOR orientation and tracking	15	15	
B. GPS operation	15	15	

<b>Maneuvering by Reference to Instruments</b> All tasks are required.			
A. Straight and level, turns, climbs, and descents	10	10	
B. Unusual attitude recovery	10	10	

<b>Emergency Operations</b> The check pilot will select at least one item.			
A. Partial / Total power failure	15	15	
B. Lost procedures	10	10	
C. System malfunction	5	5	
D. Emergency descent	10	10	

<b>Takeoffs and Landings</b> The check pilot will select at least three landings.			
A. Normal / Crosswind takeoff	10	10	
B. Normal / Crosswind landing	20	20	

<b>C. Short field takeoff</b>	10	10	
<b>D. Short field landing</b>	20	20	
<b>E. Soft field takeoff</b>	10	10	
<b>F. Soft field landing</b>	20	20	
<b>G. Full flap go-around</b>	15	15	
<b>H. Simulated emergency in the pattern</b>	15	15	

**Student Performance** All tasks are required

<b>A. Cockpit Organization</b>	5	5	
<b>B. Coordination</b>	5	5	
<b>C. Vigilance</b>	5	5	
<b>D. Judgment</b>	5	5	

**FLIGHT LESSON 21 DUAL OBJECTIVE:** The student and instructor will review maneuvers and local area navigation to refresh the student for solo flight.

CONTENT:

- A. Normal takeoff
- B. Slow flight
- C. Approach to landing stall
- D. Takeoff stall
- E. Departure stall
- F. 45° bank steep turns
- G. S turns across a road
- H. Turns around a point
- I. Simulated instrument flying - 0.3 hour
  - a. Basic attitude instrument flying
  - b. VOR orientation and tracking
  - c. Unusual attitudes
- J. Local area navigation
- K. Normal landings

**COMPLETION REQUIREMENTS:** This lesson is complete when the student has flown 0.3 simulated instrument and the instructor determines that the student is competent to practice the listed maneuvers solo.

**FLIGHT LESSON 22 SOLO OBJECTIVE:** The student will fly one of the following cross countries solo: LAF-FWA-MZZ-LAF, LAF-SBN-VPZ-LAF, LAF-CMI-IKK-LAF, or LAF-HUF-MTO-LAF. **Part 61 students should fly either: LAF-BMI-IKK-LAF or LAF-AID-FWA-LAF.** All the landings need to be to a full stop (ATC and runway permitting, stop-and-goes can be done).

**NOTE:** It is the instructor's responsibility to ensure that the student is competent to fly solo cross country. The instructor is also responsible for ensuring that all endorsements are complete as per the FARs and that:

- A) The pre-solo X-C written exam has been passed (70%) and recorded in the front of the Purdue Flight Record.***
- B) The back of the Student Pilot Certificate has been endorsed for solo cross country.***
- C) The endorsements for solo cross country in the front of the Purdue Flight Record have been completed.***

CONTENT:

- A. The instructor must review the student's cross country planning and sign the necessary endorsements. The Purdue Flight Navigation Log must be complete.
- B. Normal or crosswind takeoff
- C. Pilotage
- D. Dead reckoning
- E. Radio navigation
- F. VFR flight planning procedures
- G. Determination of ground speed and ETA

- H. Communication with FSS and ATC
- I. Proper fuel management procedures
- J. Flight plan filing, activating and closing

**COMPLETION REQUIREMENTS:** This lesson is complete when the student has flown the assigned solo cross-country.

**FLIGHT LESSON 22A SOLO OBJECTIVE:** The student will fly a triangular cross-country, with landings at three points, with the total distance at least 150 nautical miles. The route will be either LAF-BMG-DEC-LAF or LAF-RID-FWA-LAF. The selected route may be flown in reverse. All the landings must be to a full stop (ATC and runway permitting, stop-and-goes can be done).

**CONTENT:**

- A. The instructor must review the student's cross country planning and sign the necessary endorsement. The Purdue Flight Navigation Log must be complete and the student must have a printed route brief.
- B. Normal or crosswind takeoff
- C. Pilotage
- D. Dead reckoning
- E. Radio navigation
- F. VFR flight planning procedures
- G. Determination of ground speed and ETA
- H. Communication with FSS and ATC
- I. Proper fuel management procedures
- J. Flight plan filing, activating and closing

**COMPLETION REQUIREMENTS:** This lesson is complete when the student has flown the assigned flight and total solo cross country time is 5.0 hours minimum.

**FLIGHT LESSON 23 DUAL OBJECTIVE:** This is the first review flight for the Stage Two Stage Check and the Private Pilot Practical Test. At the discretion of the instructor, any of the following maneuvers may be reviewed:

**CONTENT:**

- A. Normal and/or crosswind takeoffs and landings
- B. Short and/or soft field takeoffs and landings
- C. Full flap go-around
- D. Approach-to-landing stalls
- E. Takeoff stalls
- F. Departure stalls
- G. Slow flight at minimum controllable airspeed
- H. 45° bank constant altitude turns
- I. Simulated instrument flying - 0.3 hour
  - a. Basic attitude instrument flying
  - b. VOR orientation and tracking

- c. Unusual attitudes
  - J. Rectangular course
  - K. S-turns across a road
  - L. Turns around a point
  - M. Emergency descent
  - N. Emergency approach and landing (simulated)
  - O. Systems and equipment malfunctions

**COMPLETION REQUIREMENTS:** This lesson is complete when the instructor is satisfied with the student's performance.

**FLIGHT LESSON 24 DUAL OBJECTIVE:** This is the second review flight for the Stage Two Stage Check and the Private Pilot Practical Test.

**CONTENT:**

- A. At the discretion of the instructor, any of the maneuvers listed in lesson 23 may reviewed and practiced.

**COMPLETION REQUIREMENTS:** This lesson is complete when the instructor is satisfied with the student's performance.

**FLIGHT LESSON 24A SOLO OBJECTIVE:** The student will practice the listed maneuvers solo and bring total solo time to 10.0 hours minimum.

Flight maneuvers and procedures – review

- A. Short/soft field operations
- B. Normal takeoffs and landings
- C. Turns about a point
- D. Stalls – all types previously performed
- E. Slow flight at minimum controllable airspeed
- F. 45° bank constant altitude turns.

**COMPLETION REQUIREMENTS:** This lesson is complete when the student has flown the assigned solo flight and has a minimum total of 10 hours solo.

**FLIGHT LESSON 25 DUAL OBJECTIVE:** This lesson is the final preparation for the Stage Two Stage Check and the Private Pilot Practical Test. The instructor will simulate a Private Pilot Checkride by assigning a one-leg cross country for the student to prepare. The flight will start off on the assigned cross country. The student must maintain course without the use of GPS. Once the student satisfactorily demonstrates navigational skills, any of the stage check maneuvers will be practiced, at the discretion of the instructor.

Flight maneuvers and procedures – review

- A. Normal and/or crosswind takeoffs and landings
- B. Slips to a landing
- C. Short and/or soft-field operations

- D. Stall series – all types
- E. Slow flight at minimum controllable airspeed
- F. Simulated instrument flying, including VOR tracking to and from the station and unusual attitudes
- G. Emergency procedures
- H. S turns across a road and turns around a point
- I. 45° bank constant altitude turns

**COMPLETION REQUIREMENTS:** This lesson is complete when the instructor determines that the student can meet or exceed all of the requirements in the Private Pilot Practical Test Standards, is prepared to pass the Private Pilot Practical Test, and is competent to exercise the privileges of a Private Pilot Certificate. The student should have a minimum total flight time of 48hours, including a minimum of 3.0 hours simulated instrument.

**DISCUSSION LESSON 14 OBJECTIVE:** The final preparation for the Private Pilot Practical Test and complete review of the Private Pilot Practical Test Standards. This lesson may require more than one session.

**CONTENT:**

- A. Certificates and documents
- B. Airworthiness requirements
- C. Weather information
- D. Cross country flight planning
- E. National airspace system
- F. Cirrus performance and limitations
- G. Cirrus weight and balance
- H. Operations of systems
- I. Aeromedical factors
- J. Preflight inspection
- K. Single pilot resource management
- L. Runway incursion avoidance
- M. Spin awareness
- N. Emergency operations
- O. Night operations
- P. Any other information deemed appropriate by the instructor

**COMPLETION STANDARDS:** This lesson is complete when the student meets all the standards set forth in the Private Pilot Practical Test Standards and the instructor determines that the student is prepared for the oral portion of the Private Pilot Practical Test.



**FLIGHT LESSON 26 DUAL OBJECTIVE:** To pass the Stage Two Stage Check.

**CONTENT:**

- A. Preflight briefing
- B. Flight maneuvers and procedures – see the Stage Two Stage Check description
- C. Post flight briefing

**COMPLETION STANDARDS:** This lesson is complete when the instructor is satisfied that the student is competent to pass the Private Pilot Practical Test and all items are completed to Private Pilot Practical Test Standards.

**AT 14500 Stage Two Stage Check**

The purpose of the AT 14500 Stage Two Stage Check is to determine if the student is prepared to pass the Private Pilot Practical Test and exercise the privileges of the Private Pilot Certificate.

The student will plan a VFR cross country to either Indianapolis, Champaign, or Rockford as assigned by the stage check instructor. All cross country planning, plus weight and balance and performance calculations must be complete as per the Purdue University Navigation Flight Log, prior to beginning the stage check.

The student will begin the cross country without the use of the GPS and will demonstrate the ability to navigate by pilotage and dead reckoning. At the discretion of the check instructor, the student may accomplish a ground speed check and divert to an alternate airport.

The student must also demonstrate the ability to takeoff and land, fly at critically slow airspeeds, recover from stalls, perform steep turns and ground reference maneuvers, navigate by use of radio navigation, fly by reference to instruments, and safely perform simulated emergency operations.

The stage check instructor must use the AT 14500 Stage One Stage Check electronic record keeping system to record the detailed results of the stage check.

**Stage Two Stage Check**

Item	Points Possible	Points Given	Remarks
<b>Normal Operations</b> All tasks are required			
A. Checklist usage	15	15	
B. Starting / taxiing / runup / shutdown procedures	5	5	
C. Radio procedures	15	15	
D. Traffic pattern and collision avoidance	15	15	
<b>Cross Country Procedures</b> The check pilot will select at least tasks A and B, and one other task			
A. Maintaining planned course	20	20	
B. Altitude control	10	10	
C. Ground speed check	10	10	
D. Uncontrolled airport procedures	20	20	
E. Diverting to an alternate	20	20	
<b>Flight at Critically Slow Airspeeds</b> The check pilot shall select at least tasks A and B			
A. Slow flight	10	10	
B. Approach to landing stall	10	10	
C. Takeoff stall	10	10	
D. Departure stall	10	10	
<b>Performance Maneuver</b> This task is required.			
A. Steep Turns	15	15	
<b>Ground Reference Maneuvers</b> The check pilot shall select at least one task.			
A. Rectangular Course	10	10	
B. S-Turns	10	10	
C. Turns around a point	10	10	
<b>Radio Navigation</b> The check pilot shall select at least one task.			
A. VOR orientation and tracking	15	15	
B. GPS operation	15	15	
<b>Maneuvering by Reference to Instruments</b> All tasks are required.			
A. Straight and level, turns, climbs, and descents	10	10	
B. Unusual attitude recovery	10	10	
<b>Emergency Operations</b> The check pilot will select at least two items.			
A. Partial / Total power failure	15	15	
B. Lost procedures	10	10	
C. System malfunction	5	5	
D. Emergency descent	10	10	

**Takeoffs and Landings** The check pilot shall select at least 3 takeoffs and 3 landings.

<b>A. Normal / Crosswind takeoff</b>	10	10	
<b>B. Normal / Crosswind landing</b>	20	20	
<b>C. Short field takeoff</b>	10	10	
<b>D. Short field landing</b>	20	20	
<b>E. Soft field takeoff</b>	10	10	
<b>F. Soft field landing</b>	20	20	
<b>G. Full flap go-around</b>	15	15	
<b>H. Simulated emergency in the pattern</b>	15	15	

**Student Performance** All tasks are required

<b>A. Cockpit Organization</b>	5	5	
<b>B. Coordination</b>	5	5	
<b>C. Vigilance</b>	5	5	
<b>D. Judgment</b>	5	5	

**FLIGHT LESSON 27 PIC OBJECTIVE:** To pass the Private Pilot Practical Test.

**CONTENT:** The student will take the Private Pilot Practical test.

**COMPLETION REQUIREMENT:** This lesson is complete when the student passes the Private Pilot Practical Test given by an FAA Inspector or Designated Pilot Examiner.

**Brief Lesson Synopsis**

**Stage One**

**Stage One Discussion Lessons**

Discussion Lesson 1: Introduction, Course Objectives, and Policies  
Discussion Lesson 2: Cirrus Systems  
Discussion Lesson 3: Performance and Weight and Balance  
Discussion Lesson 4: Emergency Procedures  
Discussion Lesson 5: Sectional Charts and Airspace  
Discussion Lesson 6: Aeromedical Factors  
Discussion Lesson 7: Weather and NOTAMs  
Discussion Lesson 8: Pre-Solo Written Exam  
Discussion Lesson 9: Cross Country Planning  
Discussion Lesson 10: Pre-Solo Cross Country Written Exam  
Discussion Lesson 11: Runway Incursion Avoidance  
Discussion Lesson 12: Single-Pilot Resource and Cockpit Management  
Discussion Lesson 13: Night Operations

**Stage One Ground Trainer Lessons**

Ground Trainer Lesson 1: Four Fundamentals and CAPS  
Ground Trainer Lesson 2: Four Fundamentals and Unusual Attitudes  
Ground Trainer Lesson 3: VOR Orientation and Tracking and CAPS

**Stage One Flight Lessons**

Flight Lesson 1: Introduction and Four Fundamentals  
Flight Lesson 2: Airspeed Control and Traffic Patterns  
Flight Lesson 3: Flight at Critically Slow Airspeeds  
Flight Lesson 4: Stalls and Basic Attitude Instrument Flying  
Flight Lesson 5: Ground Reference Maneuvers and Emergencies  
Flight Lesson 6: Demonstration Stalls and Landing  
Flight Lesson 7: Landings  
Flight Lesson 8: First Solo  
Flight Lesson 9: Second Supervised Solo  
Flight Lesson 10: Simulated Instrument and Specialty Takeoff and Landings  
Flight Lesson 11: Steep Turns and Ground Reference Maneuvers  
Flight Lesson 12: Local Night  
Flight Lesson 13: Solo Local Maneuvers  
Flight Lesson 14: Short Dual Cross Country  
Flight Lesson 15: First Dual Cross Country  
Flight Lesson 16: Dual Night Cross Country  
Flight Lesson 17: Second Dual Cross Country  
Flight Lesson 18: Dual Maneuvers Review  
Flight Lesson 19: Simulated Stage One Stage Check  
Flight Lesson 20: Stage One Stage Check

**Stage Two**

**Stage Two Discussion Lessons**

Discussion Lesson 14: Review for Private Pilot Checkride

**Stage Two Flight Lessons**

Flight Lesson 21: Dual Maneuvers Review

Flight Lesson 22: First Solo Cross Country

Flight Lesson 22A: Second Solo Cross Country

Flight Lesson 23: Stage Two Stage Check Review

Flight Lesson 24: Stage Two Stage Check Review

Flight Lesson 25: Simulated Stage Two Stage Check

Flight Lesson 26: Stage Two Stage Check

Flight Lesson 27: Private Pilot Check Ride