

BEALE AERO CLUB

PRIVATE PILOT SYLLABUS



2012



PRIVATE PILOT SYLLABUS

STUDENT _____

LESSON 1

Dual – Local

☉ Proof of citizenship - endorse

LESSON OBJECTIVE

- Become familiar with AC and systems
- Learn certificates and documents required, checklists. Understand preflight activities. Learn flight controls & attitudes.
- Gain an understanding of preflight procedures

PREFLIGHT DISCUSSION

- Fitness for flight
- Positive exchange of flight controls
- Certificates & documents
- Airworthiness requirements
- AC logbooks
- AC servicing
- Fuel grades

INTRODUCE

- Use of checklists
- Preflight inspection
- Certificates and documents
- Airworthiness requirements
- Airplane servicing
- Operation of systems
- Equipment checks
- Location of first aid kit & fire extinguisher
- Engine starting
- Radio communications
- Positive exchange of flight controls

DATE _____ INSTRUCTOR _____

- Taxiing
- Before takeoff check
- Normal takeoff and climb
- Straight & level flight
- Climbs, descents and level offs
- Medium banked turns (20°)
- Normal approach to landing
- After landing parking & securing

POSTFLIGHT DISCUSSION

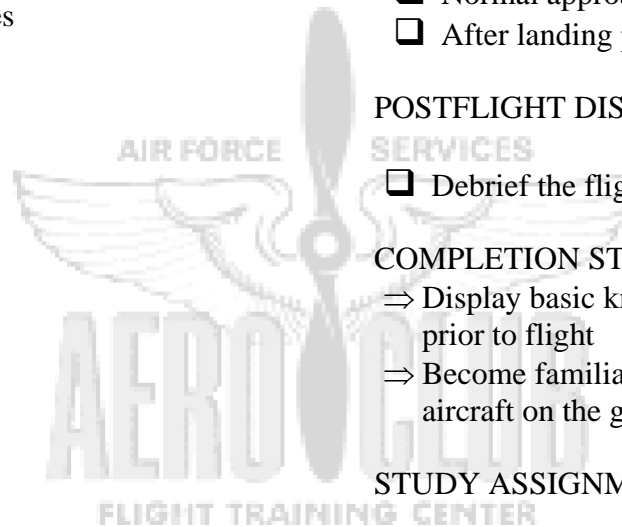
- Debrief the flight

COMPLETION STANDARDS

- ⇒ Display basic knowledge of aircraft systems and need for checks prior to flight
- ⇒ Become familiar with control systems & how they maneuver the aircraft on the ground & in the air

STUDY ASSIGNMENT

- Ground operations & basic maneuvers



PRIVATE PILOT SYLLABUS

LESSON 2

Dual – Local

LESSON OBJECTIVE

- Review procedures & maneuvers introduced in lesson 1 – focus on preflight, ground ops, attitude control using visual reference
- Introduce additional procedures & maneuvers
- Emphasis on correct procedures for preflight & ground ops

PREFLIGHT DISCUSSION

- Human factors concepts
- Preflight activities
- Engine starting
- Airport, runway, taxiway signs, markings & lighting
- Ground ops – crosswind taxi
- Collision avoidance precautions
- Airspeed configuration changes

INTRODUCE

- Airport, runway, and taxiway signs, markings & lighting
- Crosswind taxi
- Collision avoidance precautions
- Airspeed & configuration changes
- Flight at approach speed
- Traffic patterns
- Descents in high and low drag configurations

REVIEW

- Preflight inspection
- Certificates & documents
- Airworthiness requirements

STUDENT _____

DATE _____ INSTRUCTOR _____

- Operation of systems
- Positive exchange of flight controls
- Use of checklists
- Engine starting
- Radio communications
- Taxiing
- Before takeoff check
- Normal takeoff & climb
- Straight & level flight (VR)
- Climbs (VR)
- Descents (VR)
- Medium banked turns (VR)
- Normal approach & landing
- After landing parking & securing
- Airplane servicing

POSTFLIGHT DISCUSSION

- Debrief the flight

COMPLETION STANDARDS

- ⇒ Display increased proficiency in preflight activities, ground ops and coordinated airplane attitude control
- ⇒ Perform takeoffs with instructor assistance
- ⇒ Be familiar with control usage necessary to maintain altitude ± 250 feet
- ⇒ Exhibits understanding of attitude control by use of VR

STUDY ASSIGNMENT

- Flight maneuvers – book & video

PRIVATE PILOT SYLLABUS

LESSON 3

Dual – Local

- ☉ Hood required for .2 hours

LESSON OBJECTIVE

- Review airspeed control during basic maneuvers and traffic pattern ops
- Introduce stalls during various flight attitudes to increase understanding of aircraft control during normal and critical flight conditions
- Introduce attitude control by instrument reference (IR)
- Emphasis will be directed to proper execution of basic maneuvers and procedures, particularly takeoffs, traffic patterns and landings.

PREFLIGHT DISCUSSION

- Situational awareness
- Basic instrument maneuvers
- Preflight planning, operation of powerplant, aircraft systems, and engine runup procedures

INTRODUCE

- Flight at various airspeeds from cruise to slow flight
- Maneuvering during slow flight
- Power off stalls
- Power on stalls
- Straight & level flight (IR)
- Constant airspeed climbs (IR)
- Constant airspeed descents (IR)

STUDY ASSIGNMENT – Flight maneuvers – Emergency landing procedures – book & video

STUDENT _____

DATE _____ INSTRUCTOR _____

REVIEW

- Use of checklists
- Airplane servicing
- Preflight inspection
- Airworthiness requirements
- Engine starting and runup
- Radio communications
- Normal TOAL's
- Traffic patterns
- Collision avoidance procedures
- Airspeed & configuration changes
- Descents in high & low drag configurations
- Flight at approach speed
- Airport runway, taxiway markings & lighting
- Parking & securing

POSTFLIGHT DISCUSSION

- Debrief the flight

COMPLETION STANDARDS

- ⇒ Display increased proficiency in coordinated AC attitude control during basic maneuvers
- ⇒ Perform unassisted takeoffs
- ⇒ Demonstrate correct communications & traffic pattern procedures
- ⇒ Landings completed with instructor assistance
- ⇒ Maintains altitude \pm 250 feet during airspeed transitions
- ⇒ Maintains altitude \pm 250 during slow flight
- ⇒ Indicates ability to control attitude by IR

PRIVATE PILOT SYLLABUS

LESSON 4

Dual – Local

- Hood required for .2 hours

LESSON OBJECTIVE

- Practice listed maneuvers – gain additional proficiency in recognition and recovery from stalls.
- Student will receive instruction and practice in maneuvers and procedures listed for introduction – emergency ops and additional control by reference to instruments (IR).
- Instructor may demonstrate secondary, accelerated, cross-controlled and elevator trim stalls.
- Emphasis on airport ops, steep turns, slow flight, stalls, stall recovery

PREFLIGHT DISCUSSION

- Wake turbulence avoidance
- Workload management
- PIC responsibilities
- Emergency operations – equipment malfunctions
- Emergency field selection

INTRODUCE

- Systems & equipment malfunctions
- Emergency procedures
- Emergency approach to landing
- Emergency equipment survival gear
- Climbing & descending turns (VR and IR)
- Steep turns
- Turns to headings (VR and IR)
- Slow flight with distractions, recognition and recovery from stalls

STUDENT _____

DATE _____ INSTRUCTOR _____

- Spin awareness
- Demonstrated stalls – secondary, cross-controlled, and elevator trim stalls (not required for certification – demonstration for safety purposes – *students should not practice these stalls without supervision from a Certified Flight Instructor*)

REVIEW

- Airport, runway, and taxiway signs & markings
- Airspeed & configuration changes
- Flight at approach speed
- Flight at various airspeeds from cruise to slow flight
- Maneuvering during slow flight
- Power-Off stalls
- Power-On stalls
- Normal takeoffs and landings (TOAL's)
- Collision avoidance precautions
- Traffic patterns

POSTFLIGHT DISCUSSION

- Debrief the flight

COMPLETION STANDARDS

- ⇒ Increased proficiency in coordinated attitude control
- ⇒ Performs unassisted takeoffs
- ⇒ Correct communication & procedures in pattern
- ⇒ Landings completed *with assistance*
- ⇒ Basic understanding of steep turns, slow flight, stalls, recovery and spin awareness
- ⇒ Completes demonstrated stalls
- ⇒ Understands control by reference to instruments

STUDY ASSIGNMENT – Ground reference maneuvers

PRIVATE PILOT SYLLABUS

LESSON 5

Dual – Local

- Hood required for .2 hours

LESSON OBJECTIVE

- Practice the review maneuvers to gain proficiency
- Introduce ground reference maneuvers and maneuvering at slow airspeeds by *reference to instruments*
- Emphasis on emergency landings

PREFLIGHT DISCUSSION

- Situational awareness
- Realistic distractions\
- Determining wind direction

INTRODUCE

- Rectangular courses
- S-Turns
- Turns Around a Point
- Maneuvering during slow flight (IR)

REVIEW

- Positive exchange of flight controls
- Maneuvering during slow flight (VR)
- Power-Off stalls
- Power-On stalls
- Flight at slow airspeeds with distractions, and the recognition and recovery from stalls entered from straight, and turning flight
- Spin awareness
- Emergency approach to landing

STUDENT _____

DATE _____ INSTRUCTOR _____

- Emergency equipment and survival gear
- Normal TOAL's
- Turns to headings (VR)
- Turns to headings (IR)

POSTFLIGHT DISCUSSION

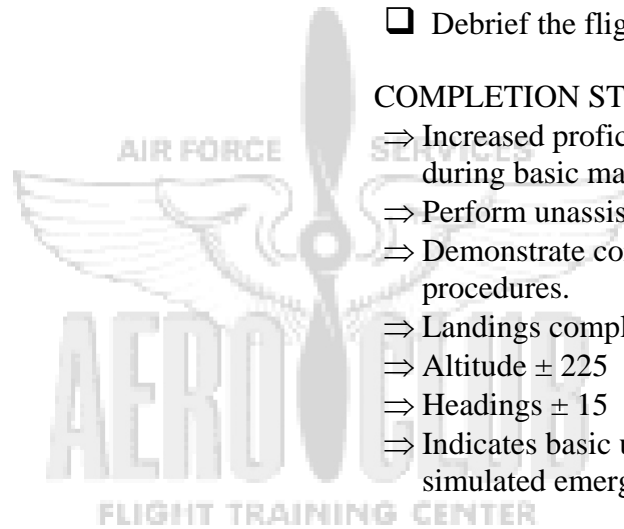
- Debrief the flight

COMPLETION STANDARDS

- ⇒ Increased proficiency in coordinated airplane attitude control during basic maneuvers.
- ⇒ Perform unassisted takeoffs
- ⇒ Demonstrate correct communications and traffic pattern procedures.
- ⇒ Landings completed with minimal assistance.
- ⇒ Altitude ± 225
- ⇒ Headings ± 15
- ⇒ Indicates basic understanding of attitude instrument flying and simulated emergency procedures.

STUDY ASSIGNMENT

- Airport operations book & video



PRIVATE PILOT SYLLABUS

LESSON 6

Dual – Local

LESSON OBJECTIVE

- Introduce go-arounds, slips and crosswind TOAL's
- Review ground reference maneuvers
- Practice review maneuvers to gain proficiency
- Emphasis on go-arounds and any advanced maneuvers that seem difficult to student

PREFLIGHT

- Communication
- Workload management
- Lost communication procedures
- Runway incursion avoidance
- LAHSO procedures

INTRODUCE

- Go-arounds – rejected landings
- Forward slips to landings
- Crosswind TOAL's
- ATC light signals
- Runway incursion avoidance
- LAHSO

REVIEW

- Rectangular courses
- S-turns
- Turns around a point
- Normal TOAL's
- Traffic patterns

STUDENT _____

DATE _____ INSTRUCTOR _____

- Wake turbulence avoidance
- Emergency approach to landing

POSTFLIGHT DISCUSSION

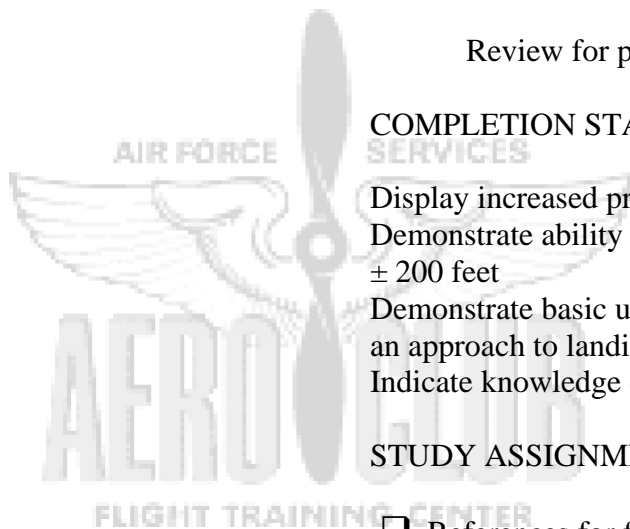
Review for prep for next lesson

COMPLETION STANDARDS

- Display increased proficiency in coordinated airplane attitude control.
- Demonstrate ability to fly specific ground track ± 200 feet
- Demonstrate basic understanding of how the forward slip is used for an approach to landing
- Indicate knowledge of crosswind TOAL's and go-arounds.

STUDY ASSIGNMENT

- References for flights 1 - 6



PRIVATE PILOT SYLLABUS

LESSON 7

Dual – Local

LESSON OBJECTIVE

- Practice instrument flight maneuvers, normal TOAL's, and emergency procedures in preparation for solo flight
- Review maneuvers and procedures that seem difficult
- Emphasis on ground reference maneuvers and emergency operations

PREFLIGHT

- Sections of FAR 61 & 91 applicable to private pilots
- Airspace rules and procedures for the solo airport
- Flight characteristics and operational limitations for solo aircraft

REVIEW

- Straight and level flight – VR & IR
- Steep turns
- Constant airspeed climbs – VR & IR
- Constant airspeed descents – VR & IR
- Climbing and descending turns
- Turns to headings – IR
- Rectangular courses
- S-turns
- Turns around a point
- Crosswind TOAL's
- Runway incursion avoidance
- LAHSO
- Go-arounds – rejected landings
- Forward slips to landings
- Systems and equipment malfunctions

STUDENT _____

DATE _____ INSTRUCTOR _____

- Emergency procedures
- Emergency approach to landing
- ATC light signals

POSTFLIGHT DISCUSSION

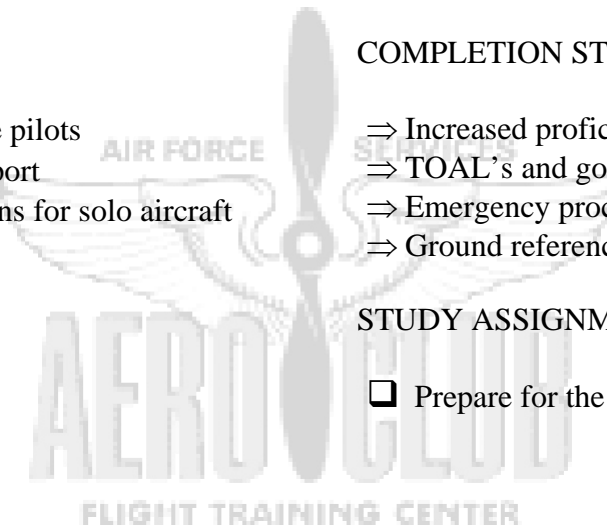
Review for prep for next lesson

COMPLETION STANDARDS

- ⇒ Increased proficiency and skill in IR scan and interpretation
- ⇒ TOAL's and go-arounds performed without assistance
- ⇒ Emergency procedures accomplished with minimal assistance
- ⇒ Ground reference maneuvers show increasing proficiency

STUDY ASSIGNMENT

- Prepare for the Pre-Solo Written Exam and briefing.



PRIVATE PILOT SYLLABUS

LESSON 8

Dual – Local

- Hood required for .2 IR
- ⊙ Instructor administers and reviews Presolo Written Test

LESSON OBJECTIVE

- Practice review maneuvers & procedures to gain proficiency and confidence
- Emphasis on correction of faulty tendencies in prep for solo

PREFLIGHT

- Presolo Written Exam critique
- Presolo flight training requirements FAR 61.87

REVIEW

- Operation of systems
- Preflight inspection
- Engine starting
- Radio communication
- Normal and or crosswind taxi
- Before takeoff check
- Normal and or crosswind TOAL's
- Climbing and descending turns
- Collision avoidance precautions
- Wake turbulence avoidance
- Straight & level flight IR
- Turns to headings IR
- Maneuvering during slow flight IR
- Power off stalls
- Power on stalls
- Maneuvering during slow flight

STUDENT _____

DATE _____ INSTRUCTOR _____

- MCA, distractions, stall recognition and recovery, S&L and turns
- Spin awareness
- Steep turns
- Rectangular courses
- S-turns
- Turns around a point
- Systems & equipment malfunctions
- Emergency procedures
- Emergency approach and landing
- Traffic patterns
- Forward slips to land
- Go-around – rejected landing
- Normal and or crosswind approach and landing

POSTFLIGHT DISCUSSION

Review for prep for next lesson

COMPLETION STANDARDS

- ⇒ Lesson complete when student passes Presolo Written with minimum score of 80% - test is reviewed
- ⇒ Demonstration of ability to safely fly solo in the pattern
- ⇒ Exhibits understanding of IR flight
- ⇒ Indicates understanding of local airspace, equipment malfunctions and related emergency procedures

STUDY ASSIGNMENT

- Review any deficient subject areas found on the Presolo Written Test. Review maneuvers – book, or video, or both.

PRIVATE PILOT SYLLABUS

LESSON 9

Dual and solo– Local

Required Endorsements

- Proof of citizenship
- Medical
- Knowledge 61.87(b) Presolo Written
- Flight training 61.87(c)

LESSON OBJECTIVE

- Review takeoff and landing to assess readiness for solo flight
- Second portion of lesson is solo
- Emphasis on correct procedures and techniques

PREFLIGHT

- Any student questions
- Student pilot supervised solo flight operations in pattern

REVIEW

- Engine starting
- Radio Communications
- Normal and or crosswind taxi ops
- Before takeoff check
- Normal takeoffs
- Traffic patterns
- Go around – rejected landing
- Normal landing

STUDENT _____

DATE _____ INSTRUCTOR _____

INTRODUCE

SUPERVISED SOLO

Landing #1 – full stop, clean up airplane and taxi back

Landing #2 – stop on runway – clean up – take off

Landing #3 – student's choice

- Radio communications
- Taxiing
- Before takeoff check
- Normal takeoffs and climbs (3)
- Traffic patterns
- Normal approaches and landings (3)
- After landing parking & securing

POSTFLIGHT DISCUSSION

- Debrief the flight
- Review of next lesson

COMPLETION STANDARDS

- ⇒ Student will display ability to solo safely in the pattern
- ⇒ At no time will the safety of the flight be in question
- ⇒ Complete solo flight safely as instructed

STUDY ASSIGNMENT

- Read ground reference maneuvers – prepare to discuss
- Prep for Stage Check

PRIVATE PILOT SYLLABUS

LESSON 10

Dual – Local

PREFLIGHT

- Maneuvers
- Procedures
- Acceptable Performance Criteria
- Applicable Rules

REVIEW

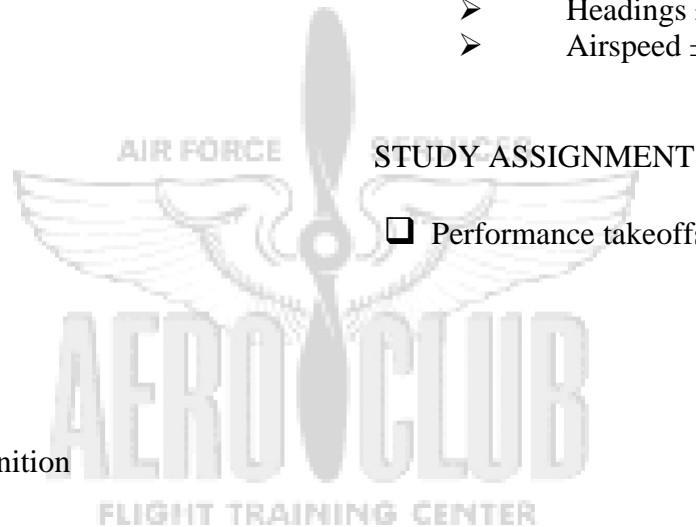
- Operation of systems
- Airworthiness requirements
- Engine starting
- Radio communications
- Taxiing
- Before takeoff check
- Collision avoidance
- Wake turbulence
- Maneuvering during slow flight
- Flight at slow airspeeds- distractions – recognition and recovery from stalls – S&L
- Spin awareness
- Power off stalls
- Power on stalls
- Systems & equipment malfunctions
- Emergency procedures
- Emergency approach and landing
- Traffic patterns
- Normal and or crosswind TOAL's

STUDENT _____

DATE _____ INSTRUCTOR _____

COMPLETION STANDARDS

- This completes Stage I when the student performs preflight duties and all other procedures and maneuvers necessary for the safe conduct of a solo flight in the local training area.
 - Altitude \pm 150 feet
 - Headings \pm 15°
 - Airspeed \pm 10 knots



STUDY ASSIGNMENT

- Performance takeoffs and landings – book & video

PRIVATE PILOT SYLLABUS

LESSON 11

Dual – Local

LESSON OBJECTIVE

- Learn procedures short and soft TOAL's.
- Review ground reference maneuvers, slow flight and stall recognition.
- Determine if student is competent to fly the second supervised solo in the traffic pattern.
- Emphasis on short and soft TOAL's.

PREFLIGHT

- Weight and balance computations
- Performance estimates
- Effects of high density altitude
- Aeronautical decision making
- PIC responsibility

INTRODUCE

- Low level wind shear precautions
- Short field and maximum performance climbs
- Soft field takeoff and climb
- Short field approach and landing
- Soft field approach and landing

REVIEW

- Rectangular courses
- Turns around a point
- S-turns
- Maneuvering during slow flight
- Flight at slow airspeeds with distractions, recognition and recovery from stalls S&L.

STUDENT _____

DATE _____ INSTRUCTOR _____

POSTFLIGHT DISCUSSION

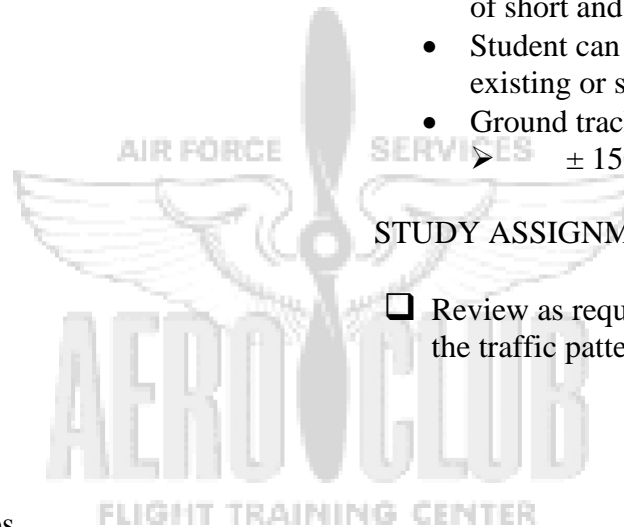
Review for prep – lesson 12, second supervised solo in traffic pattern

COMPLETION STANDARDS

- Student can explain runway conditions that necessitate the use of short and soft field techniques.
- Student can demonstrate the correct procedures used under existing or simulated conditions.
- Ground track during ground reference maneuvers:
 - ± 150 feet

STUDY ASSIGNMENT

- Review as required in preparation for second supervised solo in the traffic pattern



PRIVATE PILOT SYLLABUS

LESSON 12

Dual and/or solo – Local

- ☉ A portion of this flight may be dual – instructors call

LESSON OBJECTIVE

- Student will fly second supervised solo in the traffic pattern
- Emphasis on airport ops, TOAL's, approach & landing procedures, collision avoidance, & radio communications.

PREFLIGHT DISCUSSION

- Solo ops in the traffic pattern

REVIEW – SUPERVISED SOLO

- Radio communications
- Taxiing
- Use of checklists
- Before takeoff check (run-up)
- Normal TOAL's
- Traffic patterns
- ILS & VOR Instrument traffic in the pattern
- Normal approach to landing
- After landing, parking & securing

STUDENT _____

DATE _____ INSTRUCTOR _____

POSTFLIGHT DISCUSSION

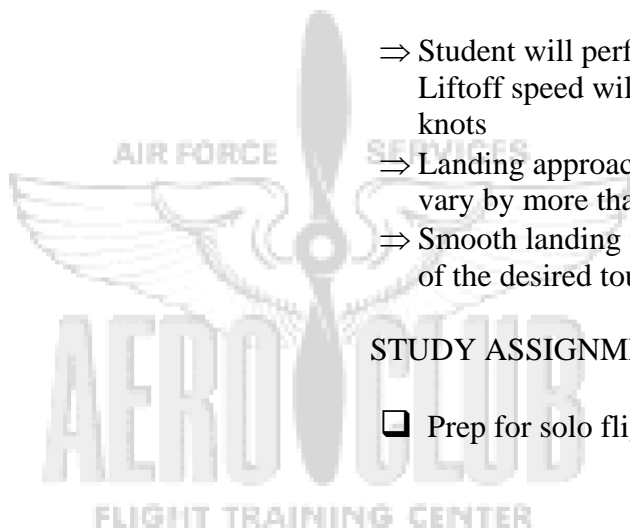
- Debrief the flight

COMPLETION STANDARDS

- ⇒ Student will perform each of the takeoffs using correct techniques. Liftoff speed will not vary from recommended by more than 5 knots
- ⇒ Landing approaches will be stabilized and approach speed will not vary by more than 5 knots from recommended airspeed
- ⇒ Smooth landing touchdowns and the correct speed within 300 feet of the desired touchdown point

STUDY ASSIGNMENT

- Prep for solo flight to practice area



PRIVATE PILOT SYLLABUS

LESSON 13

Solo – Local

LESSON OBJECTIVE

- Practice listed maneuvers to gain proficiency & confidence
- Review ground reference maneuvers to increase skill in maintaining specific ground tracks
- Practice other maneuvers as directed by the flight instructor
- Emphasis on traffic pattern entry, exit, approach and landing procedures to include use of a stabilized approach

REVIEW

- Radio communications
- Normal and/or crosswind TOAL's
- Power-Off stalls
- Power-On stalls
- Maneuvering during slow flight
- S-turns
- Turns around a point
- Traffic patterns
- Normal and / or crosswind approaches and landings

STUDENT _____

DATE _____ INSTRUCTOR _____

POSTFLIGHT DISCUSSION

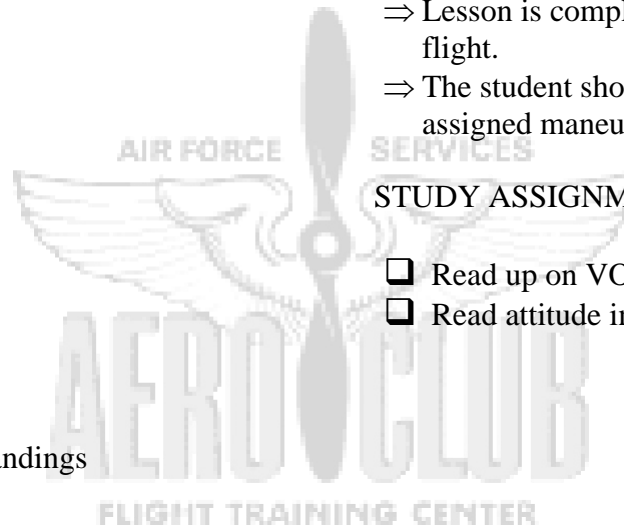
- Debrief the flight

COMPLETION STANDARDS

- ⇒ Lesson is complete when student has conducted the assigned solo flight.
- ⇒ The student should attempt to gain proficiency in each of the assigned maneuvers and procedures.

STUDY ASSIGNMENT

- Read up on VOR and ADF operations
- Read attitude instrument flying



PRIVATE PILOT SYLLABUS

LESSON 14

Dual – Local

- Hood required for .5 hours

LESSON OBJECTIVE

- Practice listed maneuvers to gain proficiency & confidence
- Introduce airplane control by instrument reference during emergency situations to broaden student's knowledge
- Emphasis on introduction of VOR and ADF orientation, tracking, & homing, as well as attitude instrument flying

PREFLIGHT DISCUSSION

- Basic instrument maneuvers to include recovery from unusual attitudes
- Radio communication, navigation systems / facilities, & radar services
- Resource use
- Situational awareness
- Disorientation

INTRODUCE

- VOR orientation & tracking (VR)
- ADF orientation & homing (VR)
- Power-off stalls (IR)
- Power-on stalls (IR)
- Recovery from unusual attitudes
- Radio communications, navigation systems / facilities, & radar services (IR)

STUDENT _____

DATE _____ INSTRUCTOR _____

REVIEW

- Low level wind shear precautions
- Short field takeoffs & maximum performance climbs
- Short field approaches & landings
- Power-Off stalls
- Power-On stalls
- Maneuvering during slow flight (IR)

POSTFLIGHT DISCUSSION

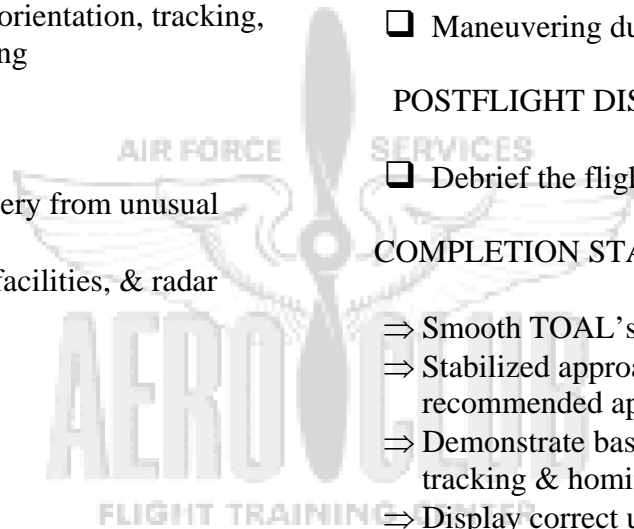
- Debrief the flight

COMPLETION STANDARDS

- ⇒ Smooth TOAL's with directional control
- ⇒ Stabilized approaches with airspeed within 5 knots of recommended approach speed
- ⇒ Demonstrate basic understanding of VOR / ADF orientation, tracking & homing
- ⇒ Display correct unusual attitude recovery techniques
- ⇒ Initiate emergency climbs & descents by instrument reference using radio communications, navigation facilities and radar services

STUDY ASSIGNMENT

- Inadvertent flight into IMC



PRIVATE PILOT SYLLABUS

LESSON 15

Dual – Local

- Hood required for .5 hours

LESSON OBJECTIVE

- Review attitude instrument flying including all instrument procedures intended to help a private pilot (non instrument rated) avoid hazardous situations due to marginal VMC or inadvertent flight into IMC
- Review short & soft field procedures and emergency operations
- Emphasis on attitude instrument flying

PREFLIGHT DISCUSSION

- Flight instrument functions, common errors, & limitations
- Navigation instruments
- Inadvertent flight into IMC
- Operations in turbulence
- Partial panel operations
- Resource use

REVIEW

- VOR orientation & tracking (VR and IR)
- ADF orientation & homing (VR and IR)
- Maneuvering during slow flight (VR and IR)
- Power-Off stalls (VR and IR)
- Power-On stalls (VR and IR)
- Using radio communication, navigation systems / facilities, and radar services (IR)
- Recovery from unusual attitudes (IR)
- Short field & maximum performance TOAL's
- Soft field TOAL's

STUDENT _____

DATE _____ INSTRUCTOR _____

- Crosswind TOAL's
- Forward slips to landings
- Go-arounds – rejected landings
- Emergency ops

POSTFLIGHT DISCUSSION

- Debrief the flight

COMPLETION STANDARDS

- ⇒ Competency in basic instrument maneuvers & procedures at the private pilot level, control of aircraft during recovery from unusual attitudes, & emergency climbs & descents
- ⇒ Maintains altitude ± 150 feet during level turns & straight & level flight.
- ⇒ Stall recovery is coordinated with minimal loss of altitude
- ⇒ Increased skill in performance TOAL's
- ⇒ Stall and unusual attitude recovery techniques correct
- ⇒ Be able to initiate emergency climbs and descents by instrument reference using radio communications, navigation facilities, & radar services

STUDY ASSIGNMENT

- Night operations

PRIVATE PILOT SYLLABUS

LESSON 16

Dual Night – Local

LESSON OBJECTIVE

- Introduce night ops
- Practice night traffic patterns, TOAL's (5 this lesson – 5 in lesson 18 to meet 10 required night landings)
- Stress importance of including instrument references for maintaining flight attitude
- Emphasize the physiological factors & additional planning associated with night flight

PREFLIGHT DISCUSSION

- Night vision
- Disorientation
- Visual illusions
- Night scanning / collision avoidance
- Aircraft, airport, & obstruction lighting
- Personal equipment

INTRODUCE

- Preparation for night flying
- Aeromedical factors
- Flight planning considerations
- Use of checklists
- Preflight inspection
- Airworthiness requirements
- Taxiing
- Before takeoff check
- Power-Off stalls
- Power-On stalls
- Steep turns

STUDENT _____

DATE _____ INSTRUCTOR _____

- Maneuvering during slow flight
- Normal TOAL's
- Short field – max performance TOAL's
- Soft field TOAL's
- Go around – rejected landing
- VFR navigation

POSTFLIGHT DISCUSSION

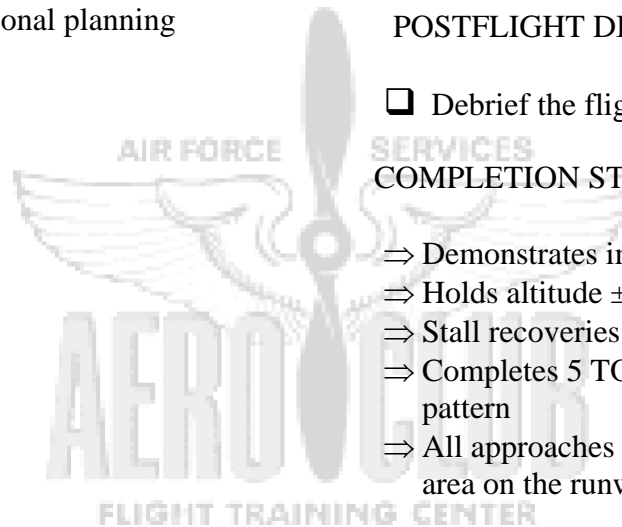
- Debrief the flight

COMPLETION STANDARDS

- ⇒ Demonstrates importance of attitude control
- ⇒ Holds altitude ± 150 during level turns, & straight & level flight.
- ⇒ Stall recoveries made with minimal loss of altitude
- ⇒ Completes 5 TOAL's to full stop involving flight in the traffic pattern
- ⇒ All approaches are stabilized with touchdown at a predetermined area on the runway

STUDY ASSIGNMENT

- Prep for dual cross country assigned by instructor



PRIVATE PILOT SYLLABUS

LESSON 17

Dual – Cross Country

- Hood required for .5 hours

LESSON OBJECTIVE

- Introduce cross-country procedures & techniques to be used during flights out of the local practice area using VOR, ADF, radar services under instrument conditions.
- Prepare the student to make cross-country flights as the sole occupant of the airplane.
- Review instrument & emergency operations.
- Emphasis on cross-country navigation procedures that include a point of landing with a straight line distance of more than 50 nautical miles from the original point of departure.

PREFLIGHT DISCUSSION

Cross Country Planning

- Sectional charts
- Flight publications
- Route selections, pilotage, & dead reckoning
- Weather information
- Fuel requirements
- Performance & limitations
- Navigation log
- FAA flight plan (file, open, amend & close)
- Weight & balance
- Cockpit management
- Aeromedical factors
- Aeronautical decision making
- Resource use
- Workload management
- Basic instrument maneuvers & procedures

STUDENT _____

DATE _____ INSTRUCTOR _____

INTRODUCE

Cross Country Flight

- Flight plan considerations
- Departure
- Opening flight plan
- Course interception
- Pilotage
- Dead reckoning
- VOR navigation
- ADF navigation
- Use of radar services (VR)
- Power setting & mixture control
- Diversion to an alternate
- Lost procedures
- Estimates of groundspeed & ETA
- Position fix by navigation facilities
- Flight on Federal Airways
- Collision avoidance precautions
- Closing the flight plan

Instrument Flight

- VOR tracking (IR)
- ADF homing (IR)
- Use of radar services (IR)

Airport Operations

- National Airspace System
- Controlled airports

LESSON 17 (Continued)

Dual – Cross Country

Airport Operations (continued)

- Use of ATIS
- Use of Approach & Departure Control
- Go around – rejected landing
- CTAF – (FSS or UNICOM) airports

REVIEW

- Emergency operations
- Systems & equipment malfunctions
- Runway incursion avoidance
- Emergency approach & landing (simulated)
- Emergency equipment & survival gear

POSTFLIGHT DISCUSSION

- Debrief the flight
- Prep for night cross country

COMPLETION STANDARDS

- ⇒ Demonstrate the skill to perform cross country flight safely as the sole occupant of the aircraft, including use of navigation systems and radar services under simulated instrument conditions.
- ⇒ Include a point of landing at least a straight line distance of more than 50 nautical miles from the original point of departure.
- ⇒ Demonstrate complete preflight planning, weather analysis, use of FAA publications & charts, adherence to the preflight plan, & use of pilotage, dead reckoning, radio communications, & navigation systems.

STUDY ASSIGNMENT

- Prep for night cross country flight



CROSS COUNTRY TRAINING ROUTE

KMYV – KCIC – KRBL – KMYV

Dual Training Route

- DISCUSS FILING AND OPENING FLIGHT PLANS (ROUND ROBIN)
- File with Rancho Murietta 1.866.272.7525 (1.800.WXBRIEF goes direct to Reno FSS) List landings at all airports in comments section.
- Open in air – prior to NorCal Contact – Keeps us under 1600 for a while
- Open in air after NorCal Contact – creates need to leave frequency – ok, but creates some more work
- Open with RCO 122.6 – Rancho Radio on the ground prior to departure
- Open and file at same time – sometimes they won't do it – be careful of delays prior to departure
- DISCUSS PILOTAGE AND DEAD RECKONING

KMYV – KCIC – 4,500 - 326°

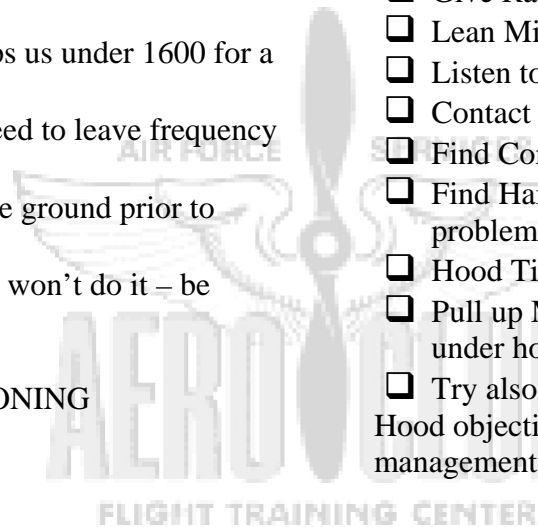
- Pick up NorCal
- Lean Mixture
- Look for landmarks – Gridley (067° From Maxwell 110.0) – Oroville
- Let down at junction of 70 & 99
- Get Chico ATIS – be prepared to call CIC Tower 10 miles out
- Prep for handoff from NorCal to Oakland Center – Advise tower inbound 10 South East (no radar in D)
- Ask for touch & go followed by full stop – taxi back
- Depart CIC – request VFR to RBL, or ask for North West departure

KCIC – KRBL – 2,500 - 304°

- Busy leg, look for bridges at Los Molinos
- Look for (I5 hard to see) if not, pull up VOR 115.7
- Discuss pattern entry RP, crossing over field, etc. Be ready
- Do short field landing – soft field take off – then soft field landing – short field take off

KRBL – KMYV - 3,500 or 5,500 - 136°

- Give Rancho Radio position report RCO 122.4
 - Lean Mixture
 - Listen to HIWAS on VOR 115.7
 - Contact Oakland Center 132.2 – request flight following
 - Find Corning – Find Orland – how to determine which is which
 - Find Hamilton City – time hack – do time, speed, distance problem in cockpit to Gridley
 - Hood Time (Try for 30 minutes)
 - Pull up MYV VOR 110.8 – use as back up for navigation while under hood
 - Try also RBL VOR 115.7 – track outbound while under hood
- Hood objectives – hold altitude, course, multi tasking, cockpit management, etc.



PRIVATE PILOT SYLLABUS

LESSON 18

Dual – Local

- Hood required for .5 hours

LESSON OBJECTIVE

- Introduce night navigation and emergency procedures
- Recognize importance of planning & navigation
- First flight should be total distance greater than 100 miles – one landing with straight line distance greater than 50 miles from departure/
- Attitude instrument flying practice.
- Emphasize precise aircraft control & accurate navigation required for night cross-country flight.

PREFLIGHT DISCUSSION

- Night orientation, navigation & chart reading techniques.
- Weather information
- Route selection
- Altitude selection
- Fuel requirements
- Departure & arrival procedures

INTRODUCE

- Use of ATIS, Approach & Departure Control
- Pilotage
- Dead Reckoning
- Radio navigation (VR & IR)
- Emergency operations
- Use of unfamiliar airports
- Collision avoidance precautions

STUDENT _____

DATE _____ INSTRUCTOR _____

- Diversion to alternate
- Lost procedures
- Unusual attitude recovery (IR)

REVIEW

- Preparation for night flight
- Aeromedical factors
- Flight plan considerations
- Maneuvering during slow flight (VR & IR)
- Normal TOAL's
- Short-field TOAL's
- Soft Field TOAL's
- Go-around / rejected landings

POSTFLIGHT DISCUSSION

- Debrief the flight

COMPLETION STANDARDS

- ⇒ Student understands night cross-country preparation & flight procedures including ability to maintain attitude by reference to instruments.
- ⇒ Navigation is accurate, emergency procedures are prompt, judgment is sound.
- ⇒ 100 & 50 nautical mile distance requirements are met.
- ⇒ Landing approaches are stabilized – touchdown at or near intended point on runway.

STUDY ASSIGNMENT

Prepare for solo cross country

PRIVATE PILOT SYLLABUS

LESSON 19

Solo – Cross Country (2.5)

LESSON OBJECTIVE

- Use previous experience & training to complete solo cross country.
- Increase proficiency and confidence.
- The flight should include a point of landing at least a straight line distance of more than 50 nautical miles from original point of departure.
- Emphasize planning and following the plan, including alternatives.

PREFLIGHT DISCUSSION

- Review the Solo Cross Country nav log
- Required documents and endorsements
- Basic VFR weather minimums and airspace rules
- Enroute communications
- ATC services available to pilots
- Enroute weather information
- VFR position report
- Emergency Operations
- Lost procedures
- Diversion
- Lost communication procedures
- ATC light signals
- Aeronautical decision making
- Resource use
- Workload management

STUDENT _____

DATE _____ INSTRUCTOR _____

REVIEW

PREFLIGHT PREPARATION

- Flight plan considerations
- Sectional charts
- Flight publications
- Route selection
- Weather information
- Fuel requirements
- Performance limitations
- Weight & balance
- Nav log
- FAA Flight Plan
- Aeromedical factors

CROSS COUNTRY FLIGHT

- Opening the flight plan
- VOR and ADF navigation
- Position fix by navigation facilities
- Pilotage
- Dead reckoning
- Flight on Federal Airways
- Use of unfamiliar airports
- Estimates of groundspeed
- Estimates of ETA
- Closing the flight plan

POSTFLIGHT DISCUSSION

- Debrief the flight
- Review the nav log

LESSON 19 (continued)

- Discuss any areas of question
- Discuss unfamiliar airports and new found understanding of them

COMPLETION STANDARDS

- ⇒ Demonstrate accurate planning and conduct of a VFR Cross Country flight using the three methods of navigation.
- ⇒ At least one landing at an airport more than 50 nm away

STUDY ASSIGNMENT

Study PTS



PRIVATE PILOT SYLLABUS

LESSON 20 - Stage Check

Dual – Local (1.0)

LESSON OBJECTIVE

- This stage check evaluates the student's TOAL's and stall recognition / recovery procedures to determine any areas of weakness.
- Additionally – the students ability to plan and conduct cross country flights will be evaluated as well as safe and effective operation to the aircraft during all other phases of flight in Stages I and II of the syllabus.

PREFLIGHT DISCUSSION

CONDUCT OF THE STAGE II FLIGHT CHECK

- Maneuvers
- Procedures
- Acceptable performance criteria
- Applicable rules

REVIEW

PREFLIGHT PREPARATION

- National airspace system
- Cross country planning
- Weather information
- Cockpit management
- Use of check lists

CROSS COUNTRY FLIGHT

- Departure
- Course interception
- VOR navigation

STUDENT _____

DATE _____ INSTRUCTOR _____

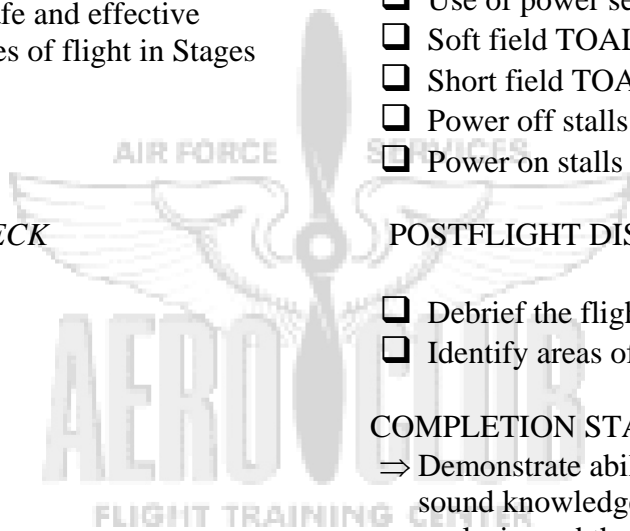
- Pilotage
- Dead Reckoning
- Collision avoidance
- Low level wind shear precautions
- Diversion to alternate
- Lost procedures
- Emergency operations
- Use of power settings and mixture control
- Soft field TOAL's
- Short field TOAL's
- Power off stalls
- Power on stalls

POSTFLIGHT DISCUSSION

- Debrief the flight
- Identify areas of operation which need attention

COMPLETION STANDARDS

- ⇒ Demonstrate ability to plan and conduct cross country flights using sound knowledge of flight planning, preflight action, weather analysis, and the appropriate aeronautical publications.
- ⇒ Exhibit the correct use of the three methods of navigation, the ability to correctly determine position at any time, and the ability to compute ETAs within 10 minutes.
- ⇒ Demonstrate the ability to plot a course to an alternate
- ⇒ Demonstrates short and soft field techniques safely with consistent results.
- ⇒ Student should be proficient in all other maneuvers and procedures, as well as the associated knowledge areas of Stages I and II prior to advancing to Stage III.



PRIVATE PILOT SYLLABUS

STAGE III

LESSON 21

Solo – Cross Country (2.0)

LESSON OBJECTIVE

- Complete the scheduled flight to improve judgment & confidence when operating in unfamiliar areas.
- The flight includes a point of landing at least a straight line distance of more than 50 nm from original point of departure
- Three TOAL's to a full stop, each landing at an airport with a control tower.
- Emphasize cross country procedures and rules for flight in Class D Airspace

PREFLIGHT DISCUSSION

- Required documents and endorsements
- Basic VFR weather minimums
- Route of flight – alternates – emergency operations
- Lost procedures
- Diversion
- ETA estimates
- Fuel requirements
- Aeronautical charts and publications that apply to the flight
- Enroute communication, ATC services and pertinent sources of weather information
- Aeronautical decision making
- Situational awareness

REVIEW

PREFLIGHT PREPARATION

- Sectional charts

STUDENT _____

DATE _____ INSTRUCTOR _____

- Flight publications
- Route selection
- Weather information
- Fuel requirements
- Performance limitations
- Weight & balance
- Nav log
- FAA Flight Plan

CROSS COUNTRY FLIGHT

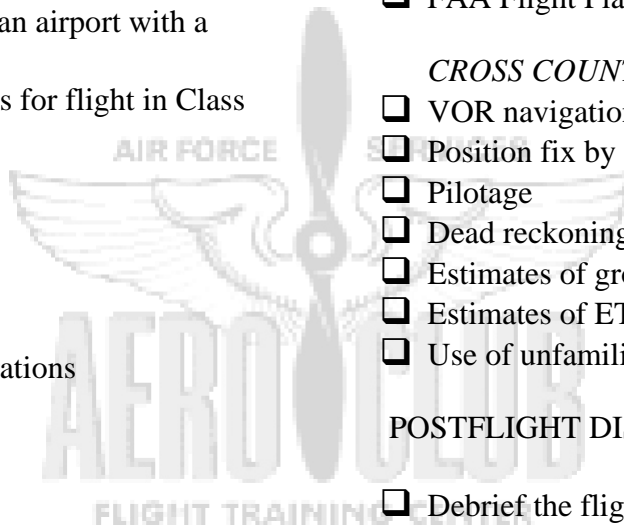
- VOR navigation
- Position fix by navigation facilities
- Pilotage
- Dead reckoning
- Estimates of groundspeed
- Estimates of ETA
- Use of unfamiliar airports

POSTFLIGHT DISCUSSION

- Debrief the flight
- Review the completed nav log
- Discuss any questions
- Address areas of challenge

COMPLETION STANDARDS

- ⇒ Lesson is complete when the flight is complete
- ⇒ Review the nav log – revised ETA at each checkpoint should not vary from the ATA by more than ± 5 minutes
- ⇒ At least one landing was made at an airport more than 50 nm from departure airport



PRIVATE PILOT SYLLABUS

STAGE III

LESSON 22

Solo Cross Country (4.0)

LESSON OBJECTIVE

- During this lesson the student completes the long cross country requirement.
- The flight is at least 100 nm total distance with landings at a minimum of 3 points – including a straight line distance of at least 50 nm between take off and landing locations.
- Three takeoff and landings to a full stop with each landing involving flight in the traffic pattern at an airport with an operating control tower (this lesson, or another as long as completed).
- Emphasize cross country procedures and rules for flight in Class D airspace.

PREFLIGHT DISCUSSION

- Conduct of the planned flight
- Cockpit management, decision making, & judgment
- FAA flight plan (how to open, amend, position report & close)
- Use of the mag compass
- Emergency operations
- Enroute communications & facilities
- In flight weather analysis & services
- Unfamiliar airport operations

REVIEW

PREFLIGHT PREPARATION

- National Airspace System
- Sectional Charts
- Flight publications

STUDENT _____

DATE _____ INSTRUCTOR _____

- Weather information
- Fuel requirements
- Performance & limitations
- Weight & balance
- Navigation log
- FAA Flight Plan

CROSS COUNTRY FLIGHT

- Opening & closing the Flight Plan
- VOR navigation
- Pilotage
- Dead reckoning
- Estimates of groundspeed
- Estimates of ETA
- Use of controlled airports
- Use of airports with CTAF (FSS & / or UNICOM)

POSTFLIGHT DISCUSSION

- Debrief the flight
- Review the completed nav log
- Discuss any area in question or areas of challenge

COMPLETION STANDARDS

- ⇒ Demonstrate proficiency by completing the flight as planned without incident
- ⇒ Review the completed nav log during post flight evaluation to determine if it was completed and used correctly
- ⇒ The cross country flight must meet the requirements, 100 nm – 50 miles between landings – three points of landing
- ⇒ Successfully accomplish 3 full stop landings at a towered airport

PRIVATE PILOT SYLLABUS
STAGE III
LESSON 23

Dual – Local (2.0)

- ☛ Hood required for maneuvers

LESSON OBJECTIVE

- Review the areas of operation, including specified maneuvers & procedures determined by the instructor to increase proficiency to the level required by the PTS.
- Further develop the student's knowledge & skill in preparation for the private pilot practical test.
- Emphasis will be on correction of any deficient skill or knowledge areas.

PREFLIGHT DISCUSSION

- Maneuvers & procedures in preparation for the Stage III Check and End of Course Check flights, and FAA Practical Test, including spin awareness and night operations.

REVIEW

- Preflight preparation
- Ground operations
- Maneuvering during slow flight (VR – IR)
- Power off and power on stalls (VR – IR)
- Steep turns
- Ground reference maneuvers
- Using radio communications, navigation systems / facilities, & radar services (IR)
- Unusual attitude recoveries (IR)

STUDENT _____

DATE _____ **INSTRUCTOR** _____

- Airport operations
- Normal & or crosswind TOAL's
- Go-arounds / rejected landings
- Short field TOAL's
- Soft field TOAL's
- Forward slips to landings
- Emergency operations
- After landing, parking, & securing
- Cross country flight procedures
- Specific maneuvers or procedures assigned by the flight instructor

POSTFLIGHT DISCUSSION

- Debrief the flight
- Discuss PTS – how to read - know what to expect
- Review Oral Exam Guide

COMPLETION STANDARDS

- ⇒ The student exhibits progress & acceptable proficiency by performing each assigned maneuver smoothly & with proper coordination and precision according to PTS.

STUDY ASSIGNMENT

- Address areas in need of attention
- Read & understand PTS – know what to expect
- Review Oral Exam Guide

PRIVATE PILOT SYLLABUS

STAGE III

LESSON 24

Dual – Local (2.0)

- Hood required for maneuvers

LESSON OBJECTIVE

- Review the areas of operation specifically assigned by the instructor with special emphasis on correcting any deficiency in the performance of maneuvers or procedures before the Stage III check.
- Further develop the student's knowledge and skill in preparation for the private pilot practical test.
- Emphasis will be on correction of any deficient skill or knowledge areas.

PREFLIGHT DISCUSSION

- Maneuvers & procedures in preparation for the Stage III , End of Course Flight Check, & FAA Practical Test, including spin awareness & night operations.

REVIEW

- Preflight preparation
- Ground operations
- Maneuvering during slow flight (VR – IR)
- Power off and power on stalls (VR – IR)
- Steep turns
- Ground reference maneuvers
- Using radio communications, navigation systems / facilities, & radar services (IR)
- Unusual attitude recoveries (IR)
- Airport operations

STUDENT _____

DATE _____ INSTRUCTOR _____

- Normal & or crosswind TOAL's
- Go-arounds / rejected landings
- Short field TOAL's
- Soft field TOAL's
- Forward slips to landings
- Emergency operations
- After landing, parking, & securing
- Cross country flight procedures
- Specific maneuvers or procedures assigned by the flight instructor

POSTFLIGHT DISCUSSION

- Debrief the flight
- Discuss PTS – how to read - know what to expect
- Review Oral Exam Guide

COMPLETION STANDARDS

- ⇒ Lesson complete when student has practiced the assigned maneuvers & procedures
- ⇒ The student exhibits competence & ability to correct weak performance areas determined previously.
- ⇒ Perform each assigned maneuver & procedure with proper coordination & precision according to the PTS

STUDY ASSIGNMENT

- Read & understand PTS – know what to expect
- Review Oral Exam Guide

PRIVATE PILOT SYLLABUS

STAGE III

LESSON 25

Dual – Local (1.0)

LESSON OBJECTIVE

- This stage check is conducted by the chief, or assistant chief flight instructor. It is intended to evaluate the student's ability to perform the listed maneuvers at the proficiency level of a private pilot.
- Additionally, the student's ability to plan and conduct cross-country flights safely will be evaluated, as well as safe and effective operation of the aircraft during all other phases of flight in Stage III of this syllabus.

PREFLIGHT DISCUSSION

CONDUCT OF THE STAGE III CHECK, INCLUDING

- Maneuvers
- Procedures
- Acceptable performance criteria
- Applicable rules
- Human factors concepts

REVIEW

MANEUVERS & PROCEDURES

- Preflight preparations
- Ground operations
- Maneuvering during slow flight (VR - IR)
- Power off stalls (VR – IR)
- Power on stalls (VR – IR)
- Steep turns
- Ground reference maneuvers
- Using radio communications, navigation systems / facilities & radar services (IR)

STUDENT _____

DATE _____ INSTRUCTOR _____

- Unusual attitude recovery (IR)
- Airport operations
- Normal & / or crosswind TOAL's
- Go arounds / rejected landings
- Short field / max performance TOAL's
- Soft field TOAL's
- Forward slips to landings
- Emergency operations
- After landing, parking, & securing

CROSS COUNTRY FLIGHT

- Radio navigation
- Pilotage & dead reckoning
- Diversion to alternate
- Lost procedures

POSTFLIGHT DISCUSSION

- Debrief the flight
- Identify areas in need of attention
- Discuss PTS expectations

COMPLETION STANDARDS

- ⇒ Each maneuver or procedure should be performed to PTS
- ⇒ Mastery of the aircraft should be evident
- ⇒ The successful outcome of each task is not in doubt
- ⇒ Maneuvers that do not meet PTS are reviewed & given additional practice
- ⇒ Student exhibits sound understanding of the knowledge, skill, and proficiency requirements for private pilot certification
- ⇒ Student exhibits ability to plan and conduct cross country flights using sound knowledge of flight planning, preflight action, weather analysis, & appropriate aeronautical publications

LESSON 25 (continued)

STUDY ASSIGNMENT

- Study the PTS – know what to expect
- Prep for End of course flight check
- Prep for Oral Exam



PRIVATE PILOT SYLLABUS

STAGE III

LESSON 26

Dual – Local (1.0)

LESSON OBJECTIVE

- This end-of-course Flight Check, conducted by the chief or assistant chief flight instructor is to evaluate the student's overall proficiency, skill, and knowledge in private pilot operations.
- Additionally, the student will exhibit the sound judgment and decision making capabilities necessary for a private pilot to operate effectively and safely within the U.S. National Airspace System.

PREFLIGHT DISCUSSION

CONDUCT OF THE FLIGHT CHECK, INCLUDING:

- Maneuvers
- Procedures
- Acceptable performance criteria
- Applicable rules

REVIEW

PREFLIGHT PREPARATION

- Certificates & documents
- Airworthiness requirements
- Weather information
- Performance & limitations
- Cross-country flight planning
- Operation of systems
- Aeromedical factors
- National Airspace System

STUDENT _____

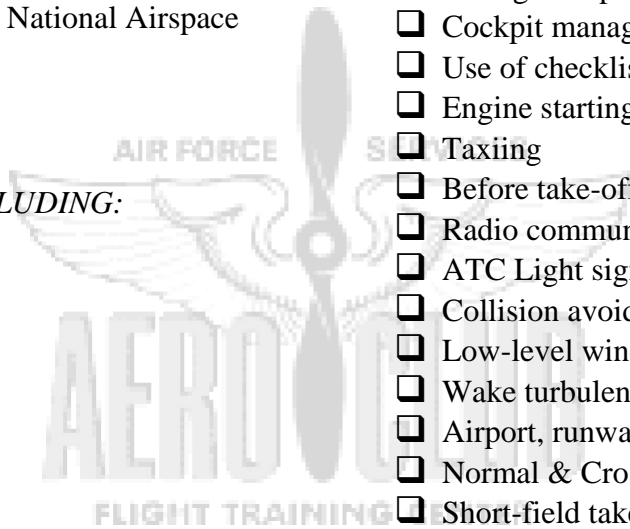
DATE _____ INSTRUCTOR _____

CROSS-COUNTRY FLYING

- Pilotage & Dead Reckoning
- Radio navigation
- Diversion to an alternate
- Lost procedures

BASIC PILOTING SKILLS

- Preflight inspection
- Cockpit management
- Use of checklist
- Engine starting
- Taxiing
- Before take-off check
- Radio communications
- ATC Light signals
- Collision avoidance precautions
- Low-level wind shear precautions
- Wake turbulence avoidance
- Airport, runway, & taxiway markings & lighting
- Normal & Crosswind take-off's
- Short-field take-off's
- Soft-field take-off's
- Straight & level flight (VR - IR)
- Constant airspeed climbs (VR – IR)
- Constant airspeed descents (VR – IR)
- Turns to headings (VR – IR)
- Unusual attitudes (IR)
- Using radio communications, navigation facilities, & radar services (IR)
- Maneuvering during slow flight
- Power-off stalls
- Power-on stalls



LESSON 26 (continued)

- Flight at slow airspeeds with realistic distractions, and the recognition and recovery from stalls entered from straight & level flight and turns
- Spin awareness
- Steep turns
- Ground reference maneuvers
- Emergency approaches & landings (simulated)
- Emergency equipment & survival gear
- Systems & equipment malfunctions
- Traffic patterns
- Normal & crosswind approaches
- Forward slips to landing
- Go-around / rejected landings
- Short field approach & landing
- Soft field approach & landing
- After landing, parking & securing

POSTFLIGHT DISCUSSION

- Debrief the flight
- Determine areas in need of attention

COMPLETION STANDARDS

- ⇒ The student demonstrates proficiency that meets or exceeds the standard of performance outlined in the current PTS.
- ⇒ Mastery of the airplane demonstrated with successful outcome of each task never in doubt.
- ⇒ Additional instruction will be assigned if necessary to meet PTS.

STUDY ASSIGNMENT

Review areas in need of attention.
Consider oral exam issues in need of attention.

