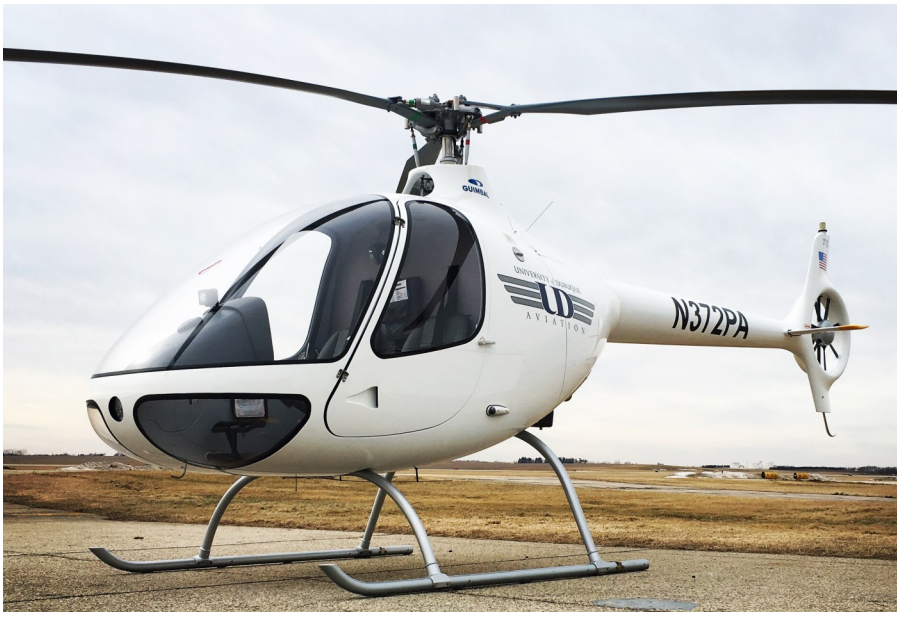
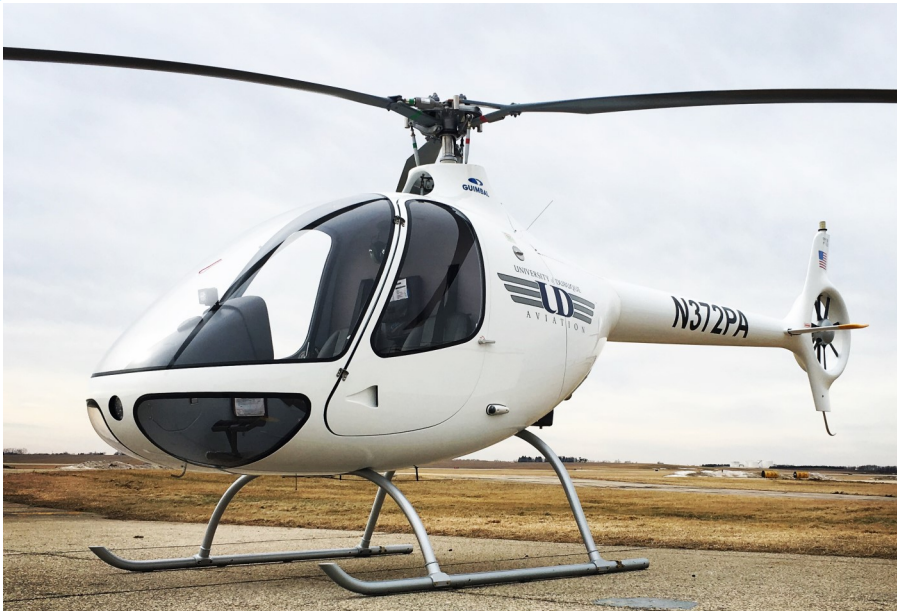


UNIVERSITY of DUBUQUE

PRIVATE PILOT
ROTORCRAFT—HELICOPTER
TRAINING COURSE OUTLINE



UNIVERSITY of DUBUQUE

PRIVATE PILOT
ROTORCRAFT—HELICOPTER
TRAINING COURSE OUTLINE

UNIVERSITY *of* DUBUQUE

This is to certify that

_____

is enrolled in the FAA approved

PRIVATE PILOT CERTIFICATION COURSE

ROTORCRAFT—HELICOPTER

conducted at the University of Dubuque

School #GV8S178Q

_____

Enrollment Date

_____ _____

Primary Flight Instructor Chief Flight Instructor

PRIVATE PILOT CERTIFICATION COURSE

STUDENT FLIGHT RECORD
University of Dubuque / 2000 University Ave / Dubuque, IA 52001
AIR AGENCY CERTIFICATE NO. GV8S178Q

FTN #

Pilot's Legal Name _____ LOA ☐ DOB_____
Pilot's Official Signature _____ SSN
_____

CITIZENSHIP

I certify that _____ has presented to me a
_____
(Certified Birth Certificate or U.S. Passport), establishing that he / she is a U.S. Citizen or national in accordance with 49 CFR 1552.3 (h).
Instructor _____ Date _____
Cert.# _____ Exp. _____

PERMANENT ADDRESS

Street _____ City _____ State_____
Zip_____ Phone: Home _____ School _____ Cell
_____

ENROLLMENT

Date of Enrollment _____ Date Completed _____
Medical Certificate: Class _____ Date Issued _____ Expires _____
Student Pilot Certificate No. _____ Date Issued _____ Expires _____
Pre-Solo Written Exam: Date _____ Score _____

SOLO ENDORSEMENTS

MAKE _____ MODEL _____ DATE _____ INSTRUCTOR
_____
MAKE _____ MODEL _____ DATE _____ INSTRUCTOR
_____
MAKE _____ MODEL _____ DATE _____ INSTRUCTOR
_____

SOLO CROSS-COUNTRY ENDORSEMENTS

1ST: DATE _____ ROUTE _____ INSTRUCTOR
_____
2ND: DATE _____ ROUTE _____ INSTRUCTOR
_____
3RD: DATE _____ ROUTE _____ INSTRUCTOR
_____

GRADUATION RECORD

FAA KNOWLEDGE TEST: DATE _____ SCORE _____
END-OF-COURSE GRADUATION: DATE _____ RESULT _____
END-OF-COURSE EXAMINER _____

RECORDS CERTIFIED COMPLETE AND ACCURATE

DATE _____ NAME _____ TITLE
_____

PREVIOUS EXPERIENCE

DUAL _____ NIGHT SOLO _____

SOLO _____ NIGHT LANDINGS _____

X-C DUAL _____ HOOD _____

X-C SOLO _____ ACTUAL IFR _____

NIGHT DUAL _____ FLIGHT TRAINING DEVICE _____

EVALUATION

FLIGHT / ORAL BY _____ DATE _____

TITLE _____

CREDIT GIVEN

GROUND HOURS: Part 141 _____ Part 61 _____ HOURS AWARDED _____

FLIGHT HOURS: Part 141 _____ Part 61 _____ HOURS AWARDED _____

TERMINATION OF TRAINING

DATE _____

CERTIFIED BY _____ _____

CHIEF INSTRUCTOR CERTIFICATE NO.

TRANSFERRED

SCHOOL _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

TRANSFER DATE _____

AIR AGENCY NO. _____

COPY ISSUED TO STUDENT: DATE _____ BY _____

List of Effective Pages

This list of effective pages shows the standing of all pages in this syllabus with regard to their revision status. The list shows the page number, the revision number and the date of the revision.

Revised pages in this syllabus will include a change bar (┃) on the side of the page where changes have been made.

The Revision Process

1. Revise the pages in question.
2. Make two copies of the revised pages.
3. Correct this "List of Effective Pages" to reflect the revised pages.
4. Make two copies of this corrected "List of Effective Pages".
5. Send all four copies to the local Flight Standards District Office for approval.
6. Insert corrected pages in all syllabus copies when approval is granted.

Page	Revision	Revision Date
1	Original	4/9/2018
2	Original	4/9/2018
3	Original	4/9/2018
4	Original	4/9/2018
5	Revision 3	11/13/2020
6	Original	4/9/2018
7	Revision 2	1/9/2020
8	Original	4/9/2018
9	Original	4/9/2018
10	Original	4/9/2018
11	Original	4/9/2018
12	Original	4/9/2018
13	Original	4/9/2018
14	Original	4/9/2018
15	Original	4/9/2018
16	Original	4/9/2018
17	Original	4/9/2018
18	Original	4/9/2018
19	Original	4/9/2018
20	Original	4/9/2018
21	Original	4/9/2018
22	Original	4/9/2018
23	Original	4/9/2018
24	Revision 3	11/13/2020
25	Original	4/9/2018
26	Revision 3	11/13/2020
27	Original	4/9/2018
28	Original	4/9/2018
29	Original	4/9/2018
30	Original	4/9/2018
31	Original	4/9/2018
32	Original	4/9/2018
33	Original	4/9/2018
34	Revision 3	11/13/2020
35	Revision 3	11/13/2020
36	Original	4/9/2018
37	Original	4/9/2018
38	Original	4/9/2018
39	Original	4/9/2018
40	Original	4/9/2018
41	Original	4/9/2018
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52	Original	4/9/2018
53	Original	4/9/2018
54	Revision 3	11/13/2020
55	Original	4/9/2018
56	Revision 3	11/13/2020
57	Original	4/9/2018
58	Original	4/9/2018
59	Original	4/9/2018
60	Original	4/9/2018
61	Original	4/9/2018
62	Original	4/9/2018
63	Revision 3	11/13/2020
64	Original	4/9/2018
65	Original	4/9/2018
66	Original	4/9/2018
67	Original	4/9/2018
68	Original	4/9/2018
69	Original	4/9/2018
70	Original	4/9/2018
71	Revision 3	11/13/2020
72	Original	4/9/2018
73	Original	4/9/2018
74	Original	4/9/2018
75	Original	4/9/2018
76	Original	4/9/2018
77	Original	4/9/2018
78	Revision 3	11/13/2020
79	Original	4/9/2018
80	Original	4/9/2018
81	Original	4/9/2018
82	Original	4/9/2018

FAA APPROVED

OFFICE DESIGNATOR: **CE01**

SIGNATURE:	EFFECTIVE DATE:
John Glenn Walberg	Digitally signed by John Glenn Walberg Date: 2021.03.25 10:30:51 -05'00'

TRAINING COURSE OUTLINE

LOCATION

The University of Dubuque, located at 2000 University Avenue, Dubuque, Iowa, 52001, holds Air Agency Certificate No. GV8S178Q. The University of Dubuque operates its pilot training school at the Dubuque Regional Airport, Dubuque, Iowa.

COURSE TITLE

Private Pilot Certification Course—Rotorcraft Helicopter
This Training Course Outline meets all the curriculum requirements for the Private Pilot Certification Course contained in Appendix B of Title 14 Code of Federal Regulation Part 141 (14 CFR Part 141). This syllabus contains separate flight training and ground training sections, which can be taught concurrently or separately.

COURSE OBJECTIVE

Students will gain the knowledge, skill and aeronautical experience necessary to meet the requirements for a Private Pilot Certificate; Rotorcraft Helicopter.

COURSE COMPLETION STANDARDS

To meet the course completion standards, students must demonstrate through knowledge, oral, flight tests, and appropriate records, that they meet the knowledge, skill and experience requirements necessary to acquire a Private Pilot Certificate, Rotorcraft Helicopter.

MAIN OPERATIONS BASE

The Dubuque Regional Airport is the main operations base for training in this course. The airport has hard-surface runways and meets the requirements of 14 CFR 141.38 for day and night operations. Fuel services and maintenance services are available weekdays during normal working hours. Weekend and after hours fuel and maintenance are available on request.

MAIN OPERATIONS FACILITY

The school's primary flight facility is the University of Dubuque Flight Operations Center, located at the Dubuque Regional Airport, Dubuque, Iowa. This building conforms to the requirements of 14 CFR 141.43 for briefing areas and 14 CFR 141.45 for ground training facilities. This permanent structure has 10 briefing areas of at least 7' by 10'. The maximum number of students per briefing area is three. Each briefing area has a phone which may be used to contact a Flight Service Station. A designated flight planning area will have current copies of the AIM, Airport/Facility Directories and NOTAMS. A computer terminal in the flight planning area is equipped with an aviation weather service and access to DUATS.

GROUND INSTRUCTIONAL FACILITIES

The primary ground instructional facilities are located at the main campus at the University of Dubuque, 2000 University Avenue, Dubuque, Iowa, 52001. These facilities are approximately 10 miles north of the Dubuque Regional Airport.
The University of Dubuque is accredited by the North Central Association of the Council for Higher Education. All of the University's classrooms meet the requirements of the Association and conform to local building, sanitation and health codes. All classrooms are centrally heated and are capable of being air conditioned either centrally or with window units.
Based on enrollment and class formats, ground school classes will be conducted in the following University of Dubuque campus classrooms and computer laboratories; Myers Library, Blades Hall, Alumni Hall, Dunlap Technology Center, MTAC and Goldthorpe Hall. Classrooms range in capacity from 142 seats in the Dunlap Technology Center to 6 seats in the Myers Library. An additional classroom with a capacity of 32 students is available at the Flight Operations Center.

GROUND INSTRUCTIONAL EQUIPMENT

Each classroom can be equipped, at the ground instructor's request, with the following items; tables, televisions with VCRs, an overhead projector with screen, whiteboards, chalkboards, adequate (to code) lighting, lectern or podium, LCD projector with laptop or desktop computer, computer/video interface units for TVs. Additionally, other audiovisual aids such as aircraft models, aircraft parts, instrument panel posters, and other appropriate aids are used to increase understanding and learning.

AIRCRAFT

Guimbal Cabri G2 aircraft is available for flight training.
For day, VFR, local area flight within 25 nautical miles of Dubuque Regional Airport or an approved satellite base, an a helicopter can be dispatched when it meets the requirements of 14 CFR 91.205 (a)(b), and has a serviceable communications radio.
For night, VFR, local area flight within 25 nautical miles of Dubuque Regional Airport or an approved satellite base, a helicopter can be dispatched when it meets the requirements of 14 CFR 91.205 (a)(b)(c), and has a serviceable communications radio, and a serviceable landing light.
For flight outside the local area, the aircraft must meet the above requirements and also be equipped with at least one serviceable VOR navigational receiver, or one panel mounted GPS receiver.

PERSONNEL

The Chief Instructor for the Private Pilot Certification Course meets the requirements for Chief Instructor as listed in the 14 CFR 141.35 (a) and (b) and has been approved by the local FAA Flight Standards District Office.
When course enrollments and individual availabilities warrant such appointments, the University of Dubuque will request the appointment of other key personnel such as; Assistant Chief Instructors, Check Instructors, and Chief Ground Instructors in accordance with 14 CFR 141.36 and 141.37.
Flight instructors will have a Certified Flight Instructor, Rotorcraft Helicopter, and will have received standardization, and will receive recurrent training annually.

CHIEF AND ASSISTANT CHIEF INSTRUCTORS

The Chief Flight Instructor for the Private Pilot Rotorcraft-Helicopter Certification Course is Zarick Kuehl, certificate #3741286.
The Assistant Chief Flight Instructor for the Private Pilot Rotorcraft-Helicopter Certification Course is Bryan Eggers #3977723.

ENROLLMENT PREREQUISITES

Students must be able to write, read, speak, and understand the English language and possess an Aviation Medical Certificate prior to enrolling in the flight portion of the Private Pilot Certification Course. Students are required to obtain a Student Pilot Certificate prior to their first solo flight.

ENROLLMENT PROCEDURE

Students will be required to show a certified birth certificate or a U.S. passport establishing U.S. citizenship or national in accordance with 49 CFR 1552.3(h). A copy of the proof of citizenship or U.S. national will be kept on file in the student's TCO. Alien flight students must apply online and be granted approval from TSA to begin flight training. Upon enrollment in the flight portion of the training syllabus students will be issued a Certificate of Enrollment showing the date of enrollment and the course entered. Students will also receive a copy of the approved training syllabus. Students may enter the ground portion of the syllabus prior to or during the flight portion. Enrollment certificates and syllabi will be retained at UD Flight Operations at all times unless otherwise directed by the Chief Instructor. Students will be provided a copy of the University of Dubuque Student Flight Operations Manual, Safety Manual, and Safety Reporting Form which outlines the school's operational and safety procedures.

CREDIT FOR PREVIOUS 14 CFR PART 141 PILOT TRAINING

Flight credit may be transferred from other certificated schools to the University of Dubuque's flight program based on an oral test, flight check, written test, or any combination thereof. Students must arrange for the transmittal of flight records from the previous school to the University of Dubuque. The University will determine the amount of credit to be transferred. Credit will be entered in the student's training record along with the documents and tests on which the acceptance is based. The maximum credit given may be up to 50% of the University's approved curriculum requirements.

CREDIT FOR PREVIOUS 14 CFR PART 61 PILOT TRAINING

Flight credit may be transferred from 14 CFR Part 61 schools to the University of Dubuque's flight program based on an oral test, flight check, written test or any combination thereof. Students should submit a record of previous training from the school where it was received. The University will determine the amount of credit to be transferred. Credit will be entered in the student's training record along with the documents and tests on which the acceptance is based. The maximum credit given may be up to 25% of the University's approved curriculum requirements.

GRADING SYSTEM FOR FLIGHT TRAINING

GRADE STANDARD

3……...Meets Practical Test Standards
2……...Meets Lesson Standards
1……...Needs Additional Training
D……...Demonstration
S……...Solo Flight

The above grading standard will be used to evaluate student performance. Grades will be entered on each lesson page. At the completion of each stage of training the students will be examined orally and by flight evaluation. Student stage evaluations will be conducted by an appropriately approved Chief Flight Instructor, Assistant Chief Flight Instructor, or Stage Check Instructor. Stage Check Instructors are not authorized to perform end-of-course evaluations.

AIRPORTS USED

The airports listed below are approved for use by the University of Dubuque, 14 CFR Part 141 Private Pilot students for the purpose of solo cross-country flights, to satisfy the requirements of the school's Private Pilot Certification Course syllabus. Mileage to these airports is indicated.

IOWA

Manchester (C27) - 35
Clinton (CWI) - 38
Tipton (8C4) - 43
Davenport (DVN) - 48
Cedar Rapids (CID) - 54

ILLINOIS

Tri-township (SFY) - 34
Freeport (FEP) - 50

WISCONSIN

Iowa County (MRJ) - 36
Prairie Du Chien (PDC) - 41
Boscobel (OVS) - 45
Monroe (EFT) - 51
Madison (MSN) - 53
Lone Rock (LNR) - 54

but Other airports may be selected by a student, those airports must be approved by a university flight instructor based on the availability of 100LL aviation gasoline.

Instructors must ensure that all airports used meet the requirements of Title 14 CFR Part 141.38 (b)(c)(d)(e)and(f).

REVIEW LESSON PROCEDURE

During training, students may need to do additional work on lessons, or review past lessons. If an instructor needs additional lesson pages the instructor will:

- Copy a blank lesson page for the lesson concerned
- Use the copied page to record the review or additional work
- Write the word "Review" in a prominent place on the copied lesson page
- Place the added lesson page(s) sequentially behind the original lesson page

	Dual Flight	Solo Flight	Dual X-Country	Solo X-Country	Dual Night	Instrument
STAGE 1	15.0	0.0	0.0	0.0	0.0	0.0
STAGE 2	11.0	2.0	5.0	0.0	3.0	1.0
STAGE 3	4.0	3.0	0.0	3.0	0.0	0.0
TOTALS	30.0	5.0	5.0	3.0	3.0	1.0

Total minimum Private Pilot flight training time is 35.0 hours

30.0 hrs + 5.0 hrs = 35 hours

HOW TO USE THIS SYLLABUS

1. This syllabus was designed to be a reasonable complete list of the tasks required for the completion of each lesson. The list of tasks relieves the instructor of having to remember all of the things that should be covered and rated in each lesson. At first, the number of tasks may seem daunting; however, they flow in a natural progression from start to finish and should cause little additional load on the instructor. Some tasks may be accompanied by italicized notes. These notes are additional memory helps for the instructor, student and check pilot.
2. At the top left of each lesson page is a block labeled “HOURS”. There are three white blocks inside the black “HOURS” block. Each lesson allows for three flights or briefings. You should put the time for each flight or briefing in one of the white boxes. When a lesson is completed, that is, when every task in the lesson has a grade of “2” or better, the instructor should total up the time for the lesson and enter it at the bottom of the page in the cumulative times area.
3. Each task in a lesson has three blank lines to the left. These lines are for recording the rating of each task. Every task in a lesson must receive a rating of ”2” or better before the lesson can be considered complete. If a lesson requires more than three flights or briefings to complete the lesson, the instructor will insert and use blank copies of the original lesson to record further flights or briefings, until the lesson is satisfactorily completed.
4. Lessons may require the instructor’s and the student’s signature or initials, along with the date, aircraft type, and aircraft “N” number at the completion of each flight or briefing.
5. The cumulative times area at the bottom of each lesson is self-explanatory. It is the instructor’s and the student's combined responsibility to make sure this area is accurately filled out, not at the conclusion of each flight or briefing, but at the conclusion of each lesson. Be sure to carry the “TOTAL” time for a finished lesson to the “PREVIOUS” time on the next lesson.
6. The “TIME” requirement at the top of each lesson is the time required for the student to stay “on track”, time wise, throughout the syllabus. A lesson may be completed with somewhat less than the approximate time noted, but this time must then be made up in later lessons if the student is to finish the syllabus with the required amount of time, this is, 35 flight / FTD hours. Stage Checks, Lessons 9 and 18, have hours noted at the bottom of the cumulative time area. These hours are listed so instructors will know the approximated hours each student should have when they reach that lesson. Having more hours than required is not a problem. Having fewer hours than suggested is cause for the instructor to be aware of the situation and work to ensure that the student finishes the syllabus with the required number of hours. On reaching Lesson 23, the required minimum hours are listed. If a student DOES NOT have these hours then they cannot be sent for a Rating Check. The instructor will have to continue with review lessons until the minimum time is met..
7. We will use the “read and do” system when doing checklists. All checklists denoted by a √, are to be read aloud by the student; and the checklist item being read must be touched as it is read to confirm the item’s correctness of position. This procedure instills consciousness of task and thoroughness in the student. If students do not “read and do” and touch the checklist items they should be instructed to repeat the checklist.
8. All hold short lines are to be called aloud and noted aloud as to whether or not the aircraft has permission to cross.

ABBREVIATIONS

acft	aircraft
airspd	airspeed
alt	altitude
approx	approximately
ARROW	airworthiness, registration, radio license (international), operator's manual, weight and balance
ATC	Air Traffic Control
CG	center of gravity
comm	communication
Cs	constant speed
cx	correction
dist	distance
equip	equipment
ETA	estimated time of arrival
FAA	Federal Aviation Association
freq	frequency / frequencies
FSS	Flight Service Station
FTD	Flight Training Device
FW	fixed wing
GPS	Global Positioning System
hdg	heading
hr	hour
ID	identify
inop	inoperative
inst	flight solely by reference to instruments while using a view limiting device
PMC	pre-maneuver checklist
MRA	manufacturer's recommended airspeed
nav	navigation
obs	omni bearing selector
ops	operations
pre	before
prep	preparation
pwr	power
req	required
sim	simulated
TACs	Terminal Area Charts
TC	true course
VHF	very high frequency
VR-IR	integrated flight training using visual and instrument reference
vol	volume
VOR	very high freq, omnidirectional, radio range
Vx	best angle of climb
Vy	best rate of climb
WACs	World Aeronautical Charts
xctry	cross country
xmitter	transmitter
xwind	crosswind
√	The aircraft checklist will be used

PRIVATE PILOT CERTIFICATION

STAGE ONE Training Course Outline

Initial Flight Training
Lessons 1—9

15 hours (approx) of dual flight training

Stage One Objectives

The student will be instructed in basic flying procedures necessary for the first solo flight.

Stage One Completion Standards

This stage will be complete when the student meets all lesson standards and satisfactorily performs the Stage One Check.

Hours		

AIRPORT OPERATIONS—(BRIEFING)
OBJECTIVE: Students will become familiar with the Dubuque Regional Airport, approved satellite bases, and procedures/materials used in the Private Pilot Certification Course.
TIME: As required

AIRPORT ENVIRONMENT

____ ____ ____ Runways
____ ____ ____ Runway markings
____ ____ ____ Taxiways
____ ____ ____ Taxiway markings
____ ____ ____ RUNWAY INCURSIONS
____ ____ ____ Ramp areas/operations
____ ____ ____ Ramp markings
____ ____ ____ UD flight practice areas

AIRPORT SERVICES

____ ____ ____ UD Flight Operations facilities
____ ____ ____ Aviation security
____ ____ ____ UD maintenance facilities
____ ____ ____ Fueling procedures
____ ____ ____ Facilities

AIR TRAFFIC CONTROL FACILITIES

____ ____ ____ Tower
____ ____ ____ Communication frequencies
____ ____ ____ Navigation facilities

TRAINING COURSE MATERIALS

____ ____ ____ Flight Operations Manual
____ ____ ____ Training Course Outline
____ ____ ____ UD Safety Manual
____ ____ ____ Helicopter Flying Manual/POH
____ ____ ____ Enrollment paperwork
____ ____ ____ Practical Test Standards
____ ____ ____ Checklist usage
____ ____ ____ Weight & balance

COMPLETION STANDARDS

The lesson will be complete when:
1. The student has been shown the airport environment.
2. The student has been tutored on the provided course materials.
3. The student's enrollment papers have been completed.

Instructor	Student	Date
_____	_____	_____
_____	_____	_____
_____	_____	_____

Hours		

PRIVATE PILOT LESSON 1—(DUAL) BASIC MANEUVERS
OBJECTIVE: The student will be introduced to, and practice piloting skills for activities listed.
TIME: Approximately 2.0 hours

PREFLIGHT BRIEFING/SPECIAL EMPHASIS

____ ____ ____ Discussion of this lesson
____ ____ ____ Weight and balance
____ ____ ____ Checklist usage
____ ____ ____ Wake turbulence / wind shear
____ ____ ____ Collision avoidance
____ ____ ____ ADM and risk management
____ ____ ____ Airport taxi operations
____ ____ ____ Positive exchange of flight controls

EMERGENCY PROCEDURES √ (Oral review)

____ ____ ____ Autorotation
____ ____ ____ Fire—startup, engine or electrical inflight, cabin
____ ____ ____ Icing—structural inflight, static port blockage, carb ice
____ ____ ____ Electrical malfunctions
____ ____ ____ Rotor/Anti-torque
____ ____ ____ Unusual frequency vibrations

PREFLIGHT

____ ____ ____ Cockpit / taxi brief
____ ____ ____ Certificates & documents—*ARROW*
____ ____ ____ Preflight inspection √
____ ____ ____ Aircraft servicing

STARTUP

____ ____ ____ Engine start √
____ ____ ____ Comm radio setup—freq, vol, xmit-ter
____ ____ ____ Engine/Rotor sync
____ ____ ____ Runup √

TAXI (if required)

____ ____ ____ Hover taxi
____ ____ ____ Taxiing—wind, speed
____ ____ ____ Air taxi

TAKEOFF / CLIMB / CRUISE

____ ____ ____ Takeoff √
____ ____ ____ Takeoff—*normal, crosswind*
____ ____ ____ Climbs √ - turn, VR-IR
____ ____ ____ Traffic pattern departure
____ ____ ____ Level-off from climb—*VR-IR*
____ ____ ____ Cruise √

BASIC MANEUVERS

____ ____ ____ Introduction of Radio Communication
____ ____ ____ Positive Exchange of Flight Controls
____ ____ ____ Straight & level—*VR-IR*
____ ____ ____ Tracking a straight line—*wind cx, VR-IR*
____ ____ ____ Level turns—shallow, medium, VR-IR
____ ____ ____ Climbing Turns +/- 500”
____ ____ ____ Acceleration / Deceleration
____ ____ ____ Introduction to Hovering
____ ____ ____ Engine checks - Temp/Pressure
____ ____ ____ Traffic checks
____ ____ ____ Descents √ - *VR-IR*
____ ____ ____ Level-off from descent—*VR-IR*

PRIVATE PILOT LESSON 1—(DUAL) BASIC MANEUVERS (CONTINUED)

LANDING

____ ____ ____ Approach—location, *communication*

____ ____ ____ Pattern entry / traffic pattern

____ ____ ____ Landing clearance

____ ____ ____ Stabilized normal approach

____ ____ ____ Rate of closure

____ ____ ____ Ground track

____ ____ ____ Stabilized hover

____ ____ ____ Go around √

____ ____ ____ Shutdown √

POSTFLIGHT

____ ____ ____ Secure aircraft as applicable

____ ____ ____ Post-flight inspection of aircraft

____ ____ ____ Debrief / update syllabus and logbook

COMPLETION STANDARDS

The lesson will be complete when all areas have a grade of 2 or better. Standards are as follows:

1. Altitude ±300 feet
2. Headings and rollouts ±20°
3. Airspeed within ±20 knots
4. Hover –1/+6
5. Maintains position ±10 feet
6. Descends vertically with no aft movement

Instructor	Student	Date	Acft Type	N#

	Dual Pre/Post	Dual Day	Dual Night	Dual X-Ctry	Dual Inst	Dual Test Prep	Solo Day	Solo X-Ctry	Total Acft	Inst
This Lesson										
Total										

Hours		

PRIVATE PILOT LESSON 2—(DUAL) BASIC MANEUVERS
OBJECTIVE: The student will be introduced to, and practice piloting skills for activities listed.
TIME: Approximately 2 hours

PREFLIGHT BRIEFING/SPECIAL EMPHASIS

____ ____ ____ Checklist usage
____ ____ ____ Weight and balance
____ ____ ____ Wake turbulence / wind shear
____ ____ ____ ADM and risk management
____ ____ ____ RUNWAY INCURSION avoidance
____ ____ ____ Positive exchange of flight controls

EMERGENCY PROCEDURES √ (Oral review)

____ ____ ____ Auto rotation/engine failure
____ ____ ____ Fire—startup, engine or electrical inflight, cabin
____ ____ ____ Icing—structural inflight, static port blockage, carb ice
____ ____ ____ Electrical malfunctions
____ ____ ____ Rotor/anti-torque
____ ____ ____ Unusual frequency vibration

PREFLIGHT

____ ____ ____ Cockpit / taxi brief
____ ____ ____ Certificates & documents—*ARROW*
____ ____ ____ Preflight inspection √
____ ____ ____ Aircraft servicing

STARTUP

____ ____ ____ Engine start √
____ ____ ____ Comm radio setup—freq, vol, trans
____ ____ ____ Engine/rotor sync
____ ____ ____ Runup √

Taxi (if required)

____ ____ ____ Hover taxi
____ ____ ____ Taxiing—wind, speed
____ ____ ____ Air taxi

TAKEOFF / CLIMB / CRUISE

____ ____ ____ Takeoff √
____ ____ ____ Takeoff clearance
____ ____ ____ Takeoff—*normal, crosswind*
____ ____ ____ Climbs √ - turn, VR-IR
____ ____ ____ Level-off from climb—*VR-IR*
____ ____ ____ Cruise √

BASIC MANEUVERS

____ ____ ____ Radio communication
____ ____ ____ Positive exchange of flight controls
____ ____ ____ Pick-up to hover
____ ____ ____ Hover
____ ____ ____ Land from hover
____ ____ ____ Hovering flight
____ ____ ____ Hover taxi
____ ____ ____ Air taxi
____ ____ ____ Takeoff from hover—normal, crosswind
____ ____ ____ Approach to hover—normal, crosswind
____ ____ ____ Steep approach to hover
____ ____ ____ Rapid deceleration
____ ____ ____ Monitor EPM– temp/pressure
____ ____ ____ Traffic checks

PRIVATE PILOT LESSON 2
(CONTINUED)

LANDING

____	____	____	Approach—*location, communication*
____	____	____	Pattern entry / traffic pattern
____	____	____	Landing clearance
____	____	____	Stabilized approach
____	____	____	Landings—*stabilized hover*
____	____	____	Rate of closure
____	____	____	Ground track
____	____	____	Go around √
____	____	____	Shutdown √

POSTFLIGHT

____	____	____	Secure aircraft as applicable
____	____	____	Post-flight inspection of aircraft
____	____	____	Debrief / update syllabus and logbook

COMPLETION STANDARDS

The lesson will be complete when all areas have a grade of 2 or better. Standards are as follows:

1. Altitude ±300 feet
2. Headings ±20°
3. Airspeed ±20 knots
4. Hover –1/+6
5. Maintains position ±10 feet
6. Descends vertically with no aft movement

Instructor _____ Student _____ Date _____ Acft Type _____ N# _____

_____ _____ _____ _____ _____

_____ _____ _____ _____ _____

	Dual Pre/Post	Dual Day	Dual Night	Dual X-Ctry	Dual Inst	Dual Test Prep	Solo Day	Solo X-Ctry	Total Acft	Inst
Previous										
This Lesson										
Total										

Hours		

PRIVATE PILOT LESSON 3—(DUAL) Approach Manuevers
OBJECTIVE: The student will apply previously learned skills to approach and landing maneuvers.
TIME: Approximately 2.0

PREFLIGHT BRIEFING/SPECIAL EMPHASIS AREAS

____ ____ ____ ADM and risk management
____ ____ ____ Weight and balance
____ ____ ____ Chair Fly—autorotation
____ ____ ____ Chair Fly—go-arounds
____ ____ ____ Positive aircraft control
____ ____ ____ RUNWAY INCURSION avoidance
____ ____ ____ CFIT/wire strike avoidance

EMERGENCY PROCEDURES √ (Oral review)

____ ____ ____ Forced landings
____ ____ ____ Fire—startup, engine or electrical in-flight, cabin
____ ____ ____ Icing—structural inflight, static port blockage, carb ice
____ ____ ____ Electrical— ammeter discharge

PREFLIGHT

____ ____ ____ Cockpit √
____ ____ ____ Certificates & documents - A*RROW*
____ ____ ____ Preflight inspection √
____ ____ ____ Aircraft servicing

STARTUP

____ ____ ____ Engine start √
____ ____ ____ Comm radio setup—freq, vol, xmit-ter
____ ____ ____ Rotor engagement
____ ____ ____ Runup √
____ ____ ____ Pre-Takeoff √

TAXI (If required)

____ ____ ____ Taxi clearance
____ ____ ____ Positive exchange of controls
____ ____ ____ Taxiing—x-wind, speed, hazards, air taxi
____ ____ ____ Traffic awareness / Call HOLD SHORT if applicable

TAKEOFF / CLIMB / CRUISE

____ ____ ____ Takeoff √
____ ____ ____ Takeoff clearance
____ ____ ____ Takeoff—*normal, crosswind*
____ ____ ____ Climbs √ - turn, Cs, VR-IR
____ ____ ____ Traffic pattern departure, FW traffic avoidance
____ ____ ____ Level-off from climb—*VR-IR*
____ ____ ____ Cruise √

BASIC MANEUVERS

____ ____ ____ Normal approach
____ ____ ____ Steep approach
____ ____ ____ Straight-in auto-rotations
____ ____ ____ Go-arounds
____ ____ ____ Traffic watch / instrument check
____ ____ ____ Instructor directed practice - See comment

_____
_____
_____
_____

EMERGENCY PROCEDURES √ (Practical review)

____ ____ ____ Engine failure—takeoff, after takeoff, inflight
____ ____ ____ Forced landings—*power, no power*

PRIVATE PILOT LESSON 3—(DUAL) Approach Manuevers (CONTINUED)

LANDING

____ ____ ____ Approach—*location, communication*

____ ____ ____ Pattern entry / traffic pattern

____ ____ ____ Landing √

____ ____ ____ Landing clearance

____ ____ ____ Stabilized approach

____ ____ ____ Landings—*normal, crosswind*

____ ____ ____ Set-down—drift, no aft movement

____ ____ ____ Taxi clearance

____ ____ ____ Runway incursion avoidance

____ ____ ____ Taxi √ - wind, speed, hazards

____ ____ ____ Air taxi

____ ____ ____ Shutdown √

POSTFLIGHT

____ ____ ____ Postflight inspection of aircraft

____ ____ ____ Debrief / update syllabus and log-book

COMPLETION STANDARDS

The lesson will be complete when all areas have a grade of 2 or better. Standards are as follows:

1. Altitude ±250 feet
2. Headings ±15°
3. Airspeed ±15 knots
4. Hover –1/+5 feet
5. Maintains position within 10 ft with no aft movement

Instructor	Student	Date	Acft Type	N#

	Dual Pre/Post	Dual Day	Dual Night	Dual X-Ctry	Dual Inst	Dual Test Prep	Solo Day	Solo X-Ctry	Total Acft	Inst
Previous										
This Lesson										
Total										

Hours		

PRIVATE PILOT LESSON 4—(DUAL) ADVANCED FLIGHT MANEUVERS
OBJECTIVE: The student will apply previously learned skills to Advanced Flight Maneuvers.
TIME: Approximately 2.0 hours of flight instruction.

PREFLIGHT BRIEFING/SPECIAL EMPHASIS AREAS

____ ____ ____ Positive aircraft control
____ ____ ____ Power management
____ ____ ____ ADM and risk management
____ ____ ____ Weight and balance
____ ____ ____ In ground effect
____ ____ ____ Out of ground effect
____ ____ ____ Initiate run-on
____ ____ ____ Collision avoidance
____ ____ ____ RUNWAY INCURSION avoidance

EMERGENCY PROCEDURES √ (Oral review)

____ ____ ____ Forced landings
____ ____ ____ Fire—startup, engine or electrical inflight
____ ____ ____ Icing—structural inflight, carb ice
____ ____ ____ Electrical— ammeter discharge
____ ____ ____ Emergency—land Immediately, land as soon as practical

PREFLIGHT

____ ____ ____ Cockpit √
____ ____ ____ Certificates & documents—*ARROW*
____ ____ ____ Preflight inspection √
____ ____ ____ Aircraft servicing

STARTUP

____ ____ ____ Engine start √
____ ____ ____ Comm radio setup—freq, vol, xmit-ter
____ ____ ____ Nav radio setup—*freq, ID*
____ ____ ____ Rotor engagement
____ ____ ____ Runup √
____ ____ ____ Pre-takeoff √

Taxi (If required)

____ ____ ____ Taxi √ / taxi brief, if necessary
____ ____ ____ Taxi clearance
____ ____ ____ Taxiing—wind, speed, hover stability check
____ ____ ____ Traffic watch

TAKEOFF / CLIMB / CRUISE

____ ____ ____ Takeoff √
____ ____ ____ Takeoff clearance
____ ____ ____ Takeoff—*normal, crosswind*
____ ____ ____ Climbs √ - turn, Cs, VR-IR
____ ____ ____ Traffic pattern / departure
____ ____ ____ Level-off from climb—*VR-IR*

ADVANCED MANEUVERS

____ ____ ____ Normal to set down
____ ____ ____ Pick up to hover
____ ____ ____ Maximum performance takeoff and climb from hover
____ ____ ____ Shallow approach
____ ____ ____ Run-on landing
____ ____ ____ Forced landing identification
____ ____ ____ Effects of low-G maneuvers and recovery

EMERGENCY PROCEDURES √ (Practical review)

____ ____ ____ Engine failure—takeoff, after takeoff, inflight
____ ____ ____ Forced landings—*power, no power*

PRIVATE PILOT LESSON 4—(DUAL) ADVANCED FLIGHT MANEUVERS (CONTINUED)

LANDING

____ ____ ____ Approach—*location, communication*

____ ____ ____ Pattern entry / traffic pattern

____ ____ ____ Landing √

____ ____ ____ Landing clearance

____ ____ ____ Stabilized approach

____ ____ ____ Landings—*normal, crosswind*

____ ____ ____ Touchdown—*drift*

____ ____ ____ Go around √

____ ____ ____ Taxi clearance—if required comply

____ ____ ____ Taxi √ - wind, speed,

____ ____ ____ Taxi—hover or air, as appropriate

____ ____ ____ Shutdown √

POSTFLIGHT

____ ____ ____ Postflight inspection of aircraft

____ ____ ____ Debrief / update syllabus and log-book

COMPLETION STANDARDS

The lesson will be complete when all areas have a grade of 2 or better. Standards are as follows:

1. Altitude ±250 feet
2. Headings ±15°
3. Airspeed ±15 knots
4. Traffic pattern altitude ±150 ft
5. Hover –1/+5 feet
6. Maintains position within 10 ft with no aft movement, as appropriate

Instructor	Student	Date	Acft Type	N#

	Dual Pre/Post	Dual Day	Dual Night	Dual X-Ctry	Dual Inst	Dual Test Prep	Solo Day	Solo X-Ctry	Total Acft	Inst
Previous										
This Lesson										
Total										

Hours		

PRIVATE PILOT LESSON 5—(DUAL) Hover Auto and Aircraft Control
OBJECTIVE: The student will apply previously learned skills to Advanced Flight Maneuvers
TIME: Approximately 2.0 hours of flight instruction.

PREFLIGHT BRIEFING/SPECIAL EMPHASIS AREAS

____ ____ ____ SRM and ADM
____ ____ ____ Weight and balance
____ ____ ____ Wake turbulence / wind shear
____ ____ ____ Collision avoidance
____ ____ ____ Positive aircraft control
____ ____ ____ RUNWAY INCURSION avoidance

EMERGENCY PROCEDURES √ (Oral review)

____ ____ ____ Forced landings
____ ____ ____ Fire—startup, engine or electrical inflight, cabin
____ ____ ____ Icing—structural inflight, carb ice
____ ____ ____ Electrical malfunctions
____ ____ ____ Emergency descent

PREFLIGHT

____ ____ ____ Cockpit √
____ ____ ____ Certificates & documents—*ARROW*
____ ____ ____ Preflight inspection √
____ ____ ____ Aircraft servicing

STARTUP

____ ____ ____ Engine start √
____ ____ ____ Comm radio setup—freq, vol, xmitter
____ ____ ____ Nav radio setup—freq, ID, set course
____ ____ ____ Rotor engagement
____ ____ ____ Runup √

Taxi (if required)

____ ____ ____ Taxi √ / taxi brief
____ ____ ____ Taxi clearance
____ ____ ____ Aircraft stability check
____ ____ ____ Positive exchange of controls
____ ____ ____ Taxiing—wind, speed

TAKEOFF / CLIMB / CRUISE

____ ____ ____ Takeoff √
____ ____ ____ Takeoff clearance
____ ____ ____ Takeoff—*normal, crosswind, steep*
____ ____ ____ Climbs √ - turn, Cs (Vx, Vy, cruise), VR-IR
____ ____ ____ Level-off from climb—*VR-IR*
____ ____ ____ Cruise √

ADVANCED MANEUVERS

____ ____ ____ Hovering Autorotation's
____ ____ ____ Engine rotor RPM—without use of governor
____ ____ ____ Systems and equipment malfunctions
____ ____ ____ Instructor directed maneuver practice
____ ____ ____ Pattern—crosswind
____ ____ ____ Pattern—downwind
____ ____ ____ Pattern—base
____ ____ ____ Pattern—final

EMERGENCY PROCEDURES √ (Practical review)

____ ____ ____ Engine failure—takeoff, after takeoff, inflight
____ ____ ____ Forced landings—*power, no power*
____ ____ ____ Emergency descent

PRIVATE PILOT LESSON 5—(DUAL) Hover Auto and Aircraft Control (CONTINUED)

LANDING

____ ____ ____ Go around √

____ ____ ____ Landings—*normal, crosswind, steep*

____ ____ ____ Touchdown—*drift*

____ ____ ____ Runway incursion avoidance

____ ____ ____ Taxi √ - wind, speed, hover or air taxi

____ ____ ____ Shutdown √

POSTFLIGHT

____ ____ ____ Postflight inspection of aircraft

____ ____ ____ Debrief / update syllabus and log-book

COMPLETION STANDARDS

The lesson will be complete when all areas have a grade of 2 or better. Standards are as follows:
1. Altitude ±200 feet/traffic pattern ±150 feet
2. Headings ±15°
3. Airspeed ±15 knots
4. Normal hover –1/+5 feet
5. Maintains position within 8 ft with no aft movement, as appropriate

Instructor	Student	Date	Acft Type	N#
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

	Dual Pre/Post	Dual Day	Dual Night	Dual X-Ctry	Dual Inst	Dual Test Prep	Solo Day	Solo X-Ctry	Total Acft	Inst
Previous										
This Lesson										
Total										

Hours		

PRIVATE PILOT LESSON 6—(DUAL) Slope Operation / Torque Failure
OBJECTIVE: The student will apply previously learned skills to Advanced Flight Maneuvers. A thorough understanding should be demonstrated regarding the Associated Harards, Risk Management, and Recovery of the Maneuvers indicated in the ADVANCED MANUEVERS category in this lesson
TIME: Approximately 2.0 hours of flight instruction.

PREFLIGHT BRIEFING/SPECIAL EMPHASIS AREAS

____ ____ ____ SRM and ADM
____ ____ ____ Weight and balance
____ ____ ____ Wake turbulence / wind shear
____ ____ ____ Collision avoidance
____ ____ ____ Positive aircraft control
____ ____ ____ RUNWAY INCURSION avoidance

EMERGENCY PROCEDURES √ (Oral review)

____ ____ ____ Forced landings
____ ____ ____ Fire—startup, engine or electrical inflight, cabin
____ ____ ____ Icing—structural inflight, carb ice
____ ____ ____ Electrical malfunctions
____ ____ ____ Emergency descent

PREFLIGHT

____ ____ ____ Cockpit √
____ ____ ____ Certificates & documents—*ARROW*
____ ____ ____ Preflight inspection √
____ ____ ____ Aircraft servicing

STARTUP

____ ____ ____ Engine start √
____ ____ ____ Comm radio setup—freq, vol, xmitter
____ ____ ____ Nav radio setup—freq, ID, set course
____ ____ ____ Rotor engagement
____ ____ ____ Runup √

TAXI (If required)

____ ____ ____ Taxi √ / taxi brief
____ ____ ____ Taxi clearance
____ ____ ____ Aircraft stability check
____ ____ ____ Positive exchange of controls
____ ____ ____ Taxiing—wind, speed, hover, air

TAKEOFF / CLIMB / CRUISE

____ ____ ____ Takeoff √
____ ____ ____ Takeoff clearance
____ ____ ____ Takeoff—*normal, crosswind, steep*
____ ____ ____ Climbs √ - turn, Cs, VR-IR
____ ____ ____ Level-off from climb—*VR-IR*
____ ____ ____ Cruise √

ADVANCED MANEUVERS

____ ____ ____ Slope Operations
____ ____ ____ Anti-torque system - Failure (Hover, Forward Flight)
____ ____ ____ Low rotor RPM recognition and recovery
____ ____ ____ Settling with power/vortex ring state
____ ____ ____ Instructor directed maneuver practice

_____
_____
_____
_____
_____

EMERGENCY PROCEDURES √ (Practical review)

____ ____ ____ Engine failure—takeoff, after takeoff, inflight
____ ____ ____ Forced landings—*power, no power*
____ ____ ____ Emergency descent

PRIVATE PILOT LESSON 6—(DUAL) Slope Operation / Torque Failure (CONTINUED)

LANDING

____ ____ ____ Go around √

____ ____ ____ Landings—*normal, crosswind steep, shallow*

____ ____ ____ Touchdown—*drift*

____ ____ ____ Taxi clearance—*hover or air*

____ ____ ____ Runway incursion avoidance

____ ____ ____ Shutdown √

POSTFLIGHT

____ ____ ____ Postflight inspection of aircraft

____ ____ ____ Debrief / update syllabus and log-book

COMPLETION STANDARDS

The lesson will be complete when all areas have a grade of 2 or better. Standards are as follows:
1. Altitude ±200 feet/±150 ft traffic pattern
2. Headings ±15°
3. Airspeed ±15 knots
4. Hover –1/+5 ft
5. Maintain position within 8 ft with no aft movement, as appropriate

Instructor	Student	Date	Acft Type	N#

	Dual Pre/Post	Dual Day	Dual Night	Dual X-Ctry	Dual Inst	Dual Test Prep	Solo Day	Solo X-Ctry	Total Acft	Inst
Previous										
This Lesson										
Total										

Hours		

PRIVATE PILOT LESSON 7—(DUAL) Pre-Stage 1 Review
OBJECTIVE: The student will apply previously learned skills to Advanced Flight Maneuvers
TIME: Approximately 2.0 hours of flight instruction.

PREFLIGHT BRIEFING/SPECIAL EMPHASIS AREAS

____ ____ ____ SRM and ADM
____ ____ ____ Weight and balance
____ ____ ____ Wake turbulence / wind shear
____ ____ ____ Collision avoidance
____ ____ ____ Positive aircraft control
____ ____ ____ RUNWAY INCURSION avoidance
____ ____ ____ Causes and Effects of LTE

EMERGENCY PROCEDURES √ (Oral review)

____ ____ ____ Forced landings
____ ____ ____ Fire—startup, engine or electrical inflight, cabin
____ ____ ____ Icing—structural inflight, carb ice
____ ____ ____ Electrical malfunctions
____ ____ ____ Emergency descent

PREFLIGHT

____ ____ ____ Cockpit √
____ ____ ____ Certificates & documents—*ARROW*
____ ____ ____ Preflight inspection √
____ ____ ____ Aircraft servicing

STARTUP

____ ____ ____ Engine start √
____ ____ ____ Comm radio setup—freq, vol, xmitter
____ ____ ____ Nav radio setup—freq, ID, set course
____ ____ ____ Rotor engagement
____ ____ ____ Runup √

Taxi (if required)

____ ____ ____ Taxi √ / taxi brief
____ ____ ____ Taxi clearance
____ ____ ____ Begin taxi—aircraft stability
____ ____ ____ Positive exchange of controls
____ ____ ____ Taxiing—wind, speed, hover, air

TAKEOFF / CLIMB / CRUISE

____ ____ ____ Takeoff √
____ ____ ____ Takeoff clearance
____ ____ ____ Takeoff—*normal, crosswind, steep*
____ ____ ____ Climbs √ - turn, Cs (Vx, Vy, cruise), VR-IR
____ ____ ____ Level-off from climb—*VR-IR*
____ ____ ____ Cruise √

MANEUVERS

____ ____ ____ Communication procedures
____ ____ ____ Traffic pattern— crosswind, downwind, base, final
____ ____ ____ Emergency procedures
____ ____ ____ Loss of Tail Rotor Effectiveness—Uncommanded Yaw/Spin Recovery
____ ____ ____ Instructor directed maneuver

_____
_____
_____
_____
_____

EMERGENCY PROCEDURES √ (Practical review)

____ ____ ____ Engine failure—takeoff, after takeoff, inflight
____ ____ ____ Forced landings—*power, no power*
____ ____ ____ Emergency descent

PRIVATE PILOT LESSON 7—(DUAL) Pre-Stage 1 Review
(CONTINUED)

LANDING

____ ____ ____ Go around √

____ ____ ____ Landings—*normal, crosswind, steep, shallow*

____ ____ ____ Roundout—*height, crosswind cx*

____ ____ ____ Touchdown—*drift*

____ ____ ____ Taxi clearance

____ ____ ____ Runway incursion avoidance

____ ____ ____ Taxi √ - wind, speed, hover or air

____ ____ ____ Shutdown √

POSTFLIGHT

____ ____ ____ Postflight inspection of aircraft

____ ____ ____ Debrief / update syllabus and log-book

COMPLETION STANDARDS

The lesson will be complete when all areas have a grade of 2 or better. Standards are as follows:
1. Altitude ±200 feet/traffic pattern ±150 feet
2. Headings ±15°
3. Airspeed ±15 knots
4. Hover –1/+5 feet
5. Maintain position within 8 feet, as appropriate

Instructor	Student	Date	Acft Type	N#

	Dual Pre/Post	Dual Day	Dual Night	Dual X-Ctry	Dual Inst	Dual Test Prep	Solo Day	Solo X-Ctry	Total Acft	Inst
Previous										
This Lesson										
Total										

Hours		

PRIVATE PILOT LESSON 8 —(BRIEFING) PRE-SOLO
OBJECTIVE: The student will demonstrate knowledge necessary to act as PIC on local solo flights.
TIME: As required.

PILOT ASSESSMENT

____ ____ ____ Hypoxia, hyperventilation
____ ____ ____ Dehydration, fatigue
____ ____ ____ Alcohol, drugs, carbon monoxide
____ ____ ____ Ear/sinus, vertigo, motion sickness
____ ____ ____ Emotional, immature behavior
____ ____ ____ SRM
____ ____ ____ ADM and risk management

CERTIFICATES—STUDENT

____ ____ ____ Syllabus correct
____ ____ ____ Verification of Student Certificate
____ ____ ____ Verification of Medical Certificate
____ ____ ____ Pre-solo aeronautical knowledge test and endorsement

DOCUMENTS—AIRCRAFT

____ ____ ____ Operating limitations
____ ____ ____ ARROW
____ ____ ____ Airworthiness directives, service bulletins
____ ____ ____ Annual / 100 hr / 50 hr

THE AIRCRAFT

____ ____ ____ Checklist usage
____ ____ ____ Performance, limitations
____ ____ ____ Weight and balance
____ ____ ____ Ignition system
____ ____ ____ Electrical system
____ ____ ____ Cabin and carb heat
____ ____ ____ Fuel system
____ ____ ____ Oil system
____ ____ ____ Aircraft performance charts
____ ____ ____ Carburetor icing
____ ____ ____ Aircraft preflight
____ ____ ____ Collision avoidance
____ ____ ____ Wake turbulence avoidance
____ ____ ____ Wind shear avoidance
____ ____ ____ Positive exchange of controls

THE FLIGHT ENVIRONMENT

____ ____ ____ Weather
____ ____ ____ TFRs and SUAs
____ ____ ____ Local geography—map the local area
____ ____ ____ Traffic pattern
____ ____ ____ Radio procedures
____ ____ ____ Lost procedures
____ ____ ____ Light gun signals
____ ____ ____ Runway incursion avoidance

PART 61

____ ____ ____ Solo privileges
____ ____ ____ Solo limitations
____ ____ ____ Medical class & duration
____ ____ ____ UD solo procedures
____ ____ ____ Aviation security

PART 91

____ ____ ____ Pilot in command
____ ____ ____ Operating limitations
____ ____ ____ Reckless ops
____ ____ ____ Dropping objects
____ ____ ____ Alcohol / drugs
____ ____ ____ Preflight actions
____ ____ ____ Seatbelts & harnesses
____ ____ ____ Near other acft
____ ____ ____ Right-of-way rules
____ ____ ____ Aircraft speeds
____ ____ ____ Minimum altitudes
____ ____ ____ Altimeter setting
____ ____ ____ Light gun signals
____ ____ ____ Fuel req
____ ____ ____ Airspace
____ ____ ____ VFR minimums

PART 91 (cont.)

____	____	____	CFIT and wire strike avoidance
____	____	____	Special VFR
____	____	____	VFR cruise altitudes
____	____	____	Operations of nav lights
____	____	____	Instr / equip req
____	____	____	ELTs
____	____	____	Inop equipment

EMERGENCY PROCEDURES √ (Oral review)

____	____	____	Engine failure—takeoff, after takeoff, inflight
____	____	____	Forced landings—*power, no power*
____	____	____	Fire—startup, engine or electrical inflight, cabin
____	____	____	Emergency descent
____	____	____	Icing—structural inflight, carb ice
____	____	____	Electrical malfunctions

SYSTEMS AND EQUIPMENT MALFUNCTIONS (Oral review)

____	____	____	Partial or complete power loss
____	____	____	Engine roughness or overheat
____	____	____	Carburetor or induction icing
____	____	____	Loss of oil pressure
____	____	____	Fuel starvation
____	____	____	Electrical malfunction
____	____	____	Inadvertent door or window opening
____	____	____	Vacuum/pressure and associated flight instrument malfunction
____	____	____	Pitot/static
____	____	____	Smoke/fire/engine compartment fire
____	____	____	Any other emergency appropriate to the aircraft _____ _____ _____ _____ _____ _____

COMPLETION STANDARDS

The student must demonstrate sufficient knowledge in the lesson areas to rate at least a 2 on each item and successfully complete the UD pre-solo exam.

Instructor	Student	Date
_____	_____	_____
_____	_____	_____
_____	_____	_____

Hours		

PRIVATE PILOT LESSON 9 - (DUAL) STAGE ONE CHECK
OBJECTIVE: The student will demonstrate competent piloting skills for the procedures listed.
TIME: Approximately 1.0 hour.

PREFLIGHT BRIEFING/SPECIAL EMPHASIS AREAS

____ ____ ____ Discussion of lesson
____ ____ ____ SRM
____ ____ ____ Weight and balance
____ ____ ____ Students certificates and syllabus
____ ____ ____ Wake turbulence / wind shear
____ ____ ____ Checklist usage
____ ____ ____ Collision avoidance
____ ____ ____ RUNWAY INCURSION avoidance
____ ____ ____ ADM and risk management
____ ____ ____ Review of emergency checklists
____ ____ ____ Positive aircraft control
____ ____ ____ CFIT
____ ____ ____ Wire strike avoidance

EMERGENCY PROCEDURES √ *(Oral review)*

____ ____ ____ Low G conditions
____ ____ ____ Fire—*startup, engine or electrical in-flight, cabin*
____ ____ ____ Anti-torque failure
____ ____ ____ Icing—*structural inflight, carb ice*
____ ____ ____ Low rotor RPM recovery
____ ____ ____ Electrical malfunction
____ ____ ____ Forced landing—*at altitude power, no power*
____ ____ ____ Dynamic rollover
____ ____ ____ Emergency equipment
____ ____ ____ Power failure at hover
____ ____ ____ Ground resonance

PREFLIGHT

____ ____ ____ Cockpit √
____ ____ ____ Certificates and documents—ARROW
____ ____ ____ Preflight inspection checklist √
____ ____ ____ Aircraft servicing
____ ____ ____ Aviation security

STARTUP

____ ____ ____ Engine start √
____ ____ ____ Comm radio setup—*freq, vol, transmitter*
____ ____ ____ Nav radio setup—*freq, ID, set course*
____ ____ ____ Rotor engagement
____ ____ ____ Runup √

TAXI—If required

____ ____ ____ Taxi √ / taxi brief
____ ____ ____ Taxi clearance
____ ____ ____ Begin taxi with stability check
____ ____ ____ Positive exchange of controls
____ ____ ____ Taxiing—*wind, speed, hazards, hover, air*

TAKEOFF / CLIMB

____ ____ ____ Takeoff √
____ ____ ____ Takeoff clearance

CROSSWIND, If required

____ ____ ____ Turns 90° ± *wind*
____ ____ ____ Checks traffic

DOWNWIND

____ ____ ____ Tracks straight downwind ± *wind*
____ ____ ____ Checks traffic and wind
____ ____ ____ Holds altitude
____ ____ ____ Landing clearance
____ ____ ____ Levels off selected altitude

BASE

____ ____ ____ Turns 90° ± *wind*
____ ____ ____ Checks traffic

FINAL

____ ____ ____ Tracks centerline ± *wind*
____ ____ ____ Checks traffic and wind

PRIVATE PILOT LESSON 9
(DUAL) STAGE ONE CHECK
(CONTINUED)

LANDING

____ ____ ____ Normal
____ ____ ____ Steep
____ ____ ____ Shallow
____ ____ ____ Go around √
____ ____ ____ Positive aircraft control
____ ____ ____ Runway incursion avoidance
____ ____ ____ Shutdown √

SPECIFIC TASKS

____ ____ ____ Vertical pick-up
____ ____ ____ Set down
____ ____ ____ Autorotative descent—straight in auto

____ ____ ____ Hover auto
____ ____ ____ Simulated forced landing
____ ____ ____ Recognition and recovery from low rotor RPM
____ ____ ____ Rapid deceleration
____ ____ ____ Governor failure

POSTFLIGHT

____ ____ ____ Postflight inspection of aircraft
____ ____ ____ Debrief / Update TCO and logbook

COMPLETION STANDARDS

The lesson will be complete when all areas have a grade of 2 or better. The standards are as follows:
1. Altitude ±150 feet
2. Headings / rollouts ±15º
3. Airspeed ±15 knots
4. Hover –1/+5 feet
5. Maintains position within 6 feet with no aft movement, as appropriate

Instructor _____ Student _____ Date _____ Acft Type _____ N# _____

_____ _____ _____ _____ _____

_____ _____ _____ _____ _____

	Dual Pre/Post	Dual Day	Dual Night	Dual X-Ctry	Dual Inst	Dual Test Prep	Solo Day	Solo X-Ctry	Total Acft	Inst
Previous										
This Lesson										
Total										
		(±15)	(0)	(0)	(0)	(0)	(0)	(0)	(±15)	(0)

PRIVATE PILOT LESSON 9
STAGE ONE CRITIQUE

COMMENTS

1 ❑ This stage check performance indicates that additional review is necessary.

A. Do Review Lessons on all items marked “1” until your Instructor indicates a satisfactory “2”.

B. Insert the Review Lesson sheets following this page.

C. Return to a check instructor.

Check Instructor _____ **Student** _____ **Date** _____

2 ❑ This stage check was performed in a satisfactory manner. Move on to the next stage.

Check Instructor _____ **Student** _____ **Date** _____

PRIVATE PILOT CERTIFICATION

STAGE TWO
Lessons 10 –18

Training Course Outline

11 hours (approx) of dual flight training
Consolidation of flight skills previously introduced
Cross-country flight training
3.0 hours (minimum) of dual night flight training to include:
One cross-country flight of more than 100 nautical miles total distance, and 10 takeoffs and landings to a full stop, at night, each landing involving a flight in the traffic pattern at an airport

2.0 hours (approx) of solo flight training

Stage Two Objectives

The student will complete first solo flight.
The student will consolidate previously introduced skills,
and be instructed in cross-country planning and flying procedures.

Stage Two Completion Standards

This stage will be complete when the student has completed each task in each lesson with a grade of 2 or better and has passed the Stage Two Check.

Hours		

PRIVATE PILOT LESSON 10—(DUAL AND SOLO) DUAL REVIEW AND FIRST SOLO
OBJECTIVE: Review of maneuvers the instructor deems necessary prior to first solo flight.
TIME: Approx .5 hour dual and approx 1.0 solo flight.

PREFLIGHT BRIEFING /SPECIAL EMPHASIS AREAS

____ ____ ____ Positive aircraft control
____ ____ ____ Weight and balance
____ ____ ____ Wake turbulence / wind shear
____ ____ ____ Checklist usage
____ ____ ____ Collision avoidance
____ ____ ____ RUNWAY INCURSION avoidance
____ ____ ____ ADM/SRM and risk management
____ ____ ____ LAHSO
____ ____ ____ LTE– Awareness and conditions leading to loss of Anti Torque effectiveness.
____ ____ ____ Anti-Torque System Failure

EMERGENCY PROCEDURES √ *(Oral review)*

____ ____ ____ Fire—startup, engine or electrical in-flight, cabin
____ ____ ____ Icing—structural inflight, static port blockage, carb ice
____ ____ ____ Electrical malfunctions
____ ____ ____ Forced landing—power, no power

PREFLIGHT

____ ____ ____ Cockpit √
____ ____ ____ Certificates and documents—ARROW
____ ____ ____ Preflight inspection checklist √
____ ____ ____ Aircraft servicing

STARTUP

____ ____ ____ Engine start √
____ ____ ____ Comm radio setup—*freq, vol,* transmitter
____ ____ ____ Runup √

TAXI (if required)

____ ____ ____ Taxi √ / taxi brief
____ ____ ____ Taxi clearance
____ ____ ____ Positive exchange of controls
____ ____ ____ Taxiing—*wind, speed, hazards, air or hover*
____ ____ ____ Traffic watch

TAKEOFF / CLIMB

____ ____ ____ Takeoff √
____ ____ ____ Takeoff clearance
____ ____ ____ Takeoff—*normal, crosswind, aborted, steep*
____ ____ ____ Climbs √—with turns, Cs (Vx, Vy, cruise)

CROSSWIND, If required

____ ____ ____ Turns 90° ± *wind*
____ ____ ____ Checks traffic
____ ____ ____ Levels off at assigned altitude

EMERGENCY PROCEDURES √ *(Practical review)*

____ ____ ____ Engine failure

DOWNWIND

____ ____ ____ Tracks straight downwind ± *wind*
____ ____ ____ Landing √
____ ____ ____ Checks traffic and wind
____ ____ ____ Holds altitude
____ ____ ____ Landing clearance

BASE

____ ____ ____ Turns 90° ± wind, if required
____ ____ ____ Checks traffic
____ ____ ____ speed, trim

LANDING

____ ____ ____ Landings—normal, crosswind
____ ____ ____ Go around √
____ ____ ____ Terminate at a hover
____ ____ ____ Proper Anti Torque input—Maintain desired Heading
____ ____ ____ Taxi clearance
____ ____ ____ Runway incursion avoidance
____ ____ ____ Shutdown √

PRIVATE PILOT LESSON 10
(DUAL AND SOLO) DUAL REVIEW AND FIRST SOLO
(CONTINUED)

POSTFLIGHT

____ ____ ____ Postflight inspection of aircraft

____ ____ ____ Dual debrief / Update TCO and logbook

FIRST SOLO FLIGHT

Three takeoffs and landings to a full stop, with each landing involving a flight in the traffic pattern, at an airport with an operating control tower.

Date _____ Instructor _____ Student _____

COMPLETION STANDARDS

The lesson will be complete when all areas have a grade of 2 or better. The standards are as follows:
1. Traffic pattern altitude ±150 feet
2. Headings / rollouts ±15º
3. Airspeed within ±15 knots
4. Hover ±1/2 assigned altitude
5. Stays within 10 feet on assigned point with no aft drift
6. Terminate approach at hover within 200 feet of selected point

Instructor	Student	Date	Acft Type	N#

	Dual Pre/Post	Dual Day	Dual Night	Dual X-Ctry	Dual Inst	Dual Test Prep	Solo Day	Solo X-Ctry	Total Acft	Inst
Previous										
This Lesson										
Total										

Hours		

PRIVATE PILOT LESSON 11—(DUAL) CONFINED AREA /PINNACLE OPERATIONS
OBJECTIVE: The student will practice previously learned piloting skills and be introduced approach selection based on confinement. Approach and Departure power requirements.
TIME: Approx 1.5 hours of flight instruction.

PREFLIGHT BRIEFING/SPECIAL EMPHASIS AREAS

____ ____ ____ Positive aircraft control
____ ____ ____ Weight and balance
____ ____ ____ Wake turbulence / wind shear
____ ____ ____ Collision avoidance
____ ____ ____ Checklist usage
____ ____ ____ RUNWAY INCURSION avoidance
____ ____ ____ CFIT/Wire strike avoidance

EMERGENCY PROCEDURES √ *(Oral review)*

____ ____ ____ Fire—*startup, engine or electrical in-flight, cabin*
____ ____ ____ Icing—*structural inflight, static port blockage, carb ice*
____ ____ ____ Electrical malfunctions
____ ____ ____ Forced landing—*power, no power*

PREFLIGHT

____ ____ ____ Cockpit √
____ ____ ____ Certificates and documents—ARROW
____ ____ ____ Preflight inspection checklist √
____ ____ ____ Aircraft servicing

STARTUP

____ ____ ____ Engine start √
____ ____ ____ Comm radio setup—*freq, vol, transmitter*
____ ____ ____ Runup √

TAXI (if required)

____ ____ ____ Taxi clearance
____ ____ ____ Positive exchange of controls
____ ____ ____ Taxiing—*wind, speed, hazards, air or hover*
____ ____ ____ Traffic watch / Call HOLD SHORT lines

TAKEOFF / CLIMB / CRUISE

____ ____ ____ Takeoff √
____ ____ ____ Takeoff clearance
____ ____ ____ Takeoff—*normal, crosswind*
____ ____ ____ Cruise √—*VR-IR*

NAVIGATION

____ ____ ____ Pilotage / Dead reckoning
____ ____ ____ GPS navigation / Tracking
____ ____ ____ SUAs

ADVANCED MANEUVERS

____ ____ ____ Clearing Turn
____ ____ ____ High and low reconnaissance—altitude maintained
____ ____ ____ Hazard recognition
____ ____ ____ Power management
____ ____ ____ Approach selection
____ ____ ____ Go-around
____ ____ ____ Approach to hover—rate of closure, rate of descent
____ ____ ____ Ground reconnaissance
____ ____ ____ Take-off—max, required, normal
____ ____ ____ Aeronautical Decision Making

EMERGENCY PROCEDURES √ *(Practical review)*

____ ____ ____ Engine failure—*takeoff, altitude, and pattern*
____ ____ ____ Emergency descent

LANDING

____ ____ ____ Approach—*location, communication*
____ ____ ____ Pattern entry, if required
____ ____ ____ Traffic pattern, if required
____ ____ ____ Landing clearance
____ ____ ____ Stabilized approach
____ ____ ____ Go around √
____ ____ ____ Landings—*normal, crosswind, steep*
____ ____ ____ Runway incursion avoidance
____ ____ ____ Shutdown √

PRIVATE PILOT LESSON 11
(DUAL) CONFINED AREA /PINNACLE OPERATIONS
(CONTINUED)

POSTFLIGHT

____ ____ ____ Postflight inspection of aircraft

____ ____ ____ Debrief / Update TCO and logbook

COMPLETION STANDARDS

The lesson will be complete when all areas have a grade of 2 or better. The standards are as follows:
1. Basic understanding of confined operations
2. Perform operation safely
3. Performs all clearing and recon turns

Instructor	Student	Date	Acft Type	N#

	Dual Pre/Post	Dual Day	Dual Night	Dual X-Ctry	Dual Inst	Dual Test Prep	Solo Day	Solo X-Ctry	Total Acft	Inst
Previous										
This Lesson										
Total										

Hours		

PRIVATE PILOT LESSON 12—(DUAL) AUTOROTATION
OBJECTIVE: Student will practice the previously learned piloting skills.
TIME: Approx 2.0 hour.

PREFLIGHT BRIEFING /SPECIAL EMPHASIS AREAS

____ ____ ____ Discussion of lesson
____ ____ ____ SRM, ADM and risk management
____ ____ ____ Weight and balance
____ ____ ____ Wake turbulence / wind shear
____ ____ ____ CFIT/wire strike avoidance
____ ____ ____ Collision avoidance
____ ____ ____ Checklist usage
____ ____ ____ Positive aircraft control
____ ____ ____ RUNWAY INCURSION avoidance

EMERGENCY PROCEDURES √ *(Oral review)*

____ ____ ____ Fire—*startup, engine or electrical in-flight, cabin*
____ ____ ____ Icing—*structural inflight, static port blockage, carb ice*
____ ____ ____ Electrical malfunctions
____ ____ ____ Engine failure—take off run, pattern
____ ____ ____ Emergency descent

PREFLIGHT

____ ____ ____ Cockpit √
____ ____ ____ Certificates and documents—ARROW
____ ____ ____ Preflight inspection √
____ ____ ____ Aircraft servicing
____ ____ ____ Runup √

STARTUP

____ ____ ____ Engine start √
____ ____ ____ Comm radio setup
____ ____ ____ Nav radio setup

TAXI (If required)

____ ____ ____ Taxi √ / taxi brief
____ ____ ____ Taxi clearance
____ ____ ____ Taxiing—*wind, speed, hazards, air or hover*
____ ____ ____ Traffic awareness

TAKEOFF / CLIMB / CRUISE

____ ____ ____ Pre-takeoff √
____ ____ ____ Takeoff clearance
____ ____ ____ Takeoff—*normal, crosswind, steep*
____ ____ ____ Climbs √
____ ____ ____ Level-off from climb
____ ____ ____ Engine checks, traffic checks

NAVIGATION

____ ____ ____ Pilotage / dead reckoning / GPS / tracking
____ ____ ____ TFRs and SUAs

ADVANCED MANEUVERS

____ ____ ____ 180° autorotation
____ ____ ____ Running takeoff
____ ____ ____ Hovering auto
____ ____ ____ Rapid deceleration

LANDING

____ ____ ____ Approach—*location, communication*
____ ____ ____ Landing √
____ ____ ____ Traffic pattern, if required
____ ____ ____ Landing clearance
____ ____ ____ Stabilized approach
____ ____ ____ Go around √
____ ____ ____ Landings—*normal, crosswind, steep*
____ ____ ____ Roundout—*height, crosswind control*
____ ____ ____ Hover
____ ____ ____ Taxi clearance
____ ____ ____ Taxi √—*wind, speed, hazards, air or hover*
____ ____ ____ Shutdown √

PRIVATE PILOT LESSON 12
(DUAL) ENHANCED AUTOROTATION
(CONTINUED)

POSTFLIGHT

____ ____ ____ Postflight inspection of aircraft

____ ____ ____ Dual debrief / Update TCO and log-book

COMPLETION STANDARDS

The lesson will be complete when the student has:
1. Practiced 180° autorotations, terminates at hover within 300 feet of safety point
2. Completed a basic understanding of enhanced autorotation procedures
3. Safely perform running takeoff

Instructor	Student	Date	Acft Type	N#

	Dual Pre/Post	Dual Day	Dual Night	Dual X-Ctry	Dual Inst	Dual Test Prep	Solo Day	Solo X-Ctry	Total Acft	Inst
Previous										
This Lesson										
Total										

Hours		

PRIVATE PILOT LESSON 13—(SOLO) SOLO
OBJECTIVE: Review of maneuvers the instructor deems necessary prior to solo flight.
TIME: Approx 1.0 hr solo flight.

PREFLIGHT BRIEFING /SPECIAL EMPHASIS AREAS

____ ____ ____ Positive aircraft control
____ ____ ____ Wake turbulence / wind shear
____ ____ ____ Weight and balance
____ ____ ____ Checklist usage
____ ____ ____ Collision avoidance
____ ____ ____ RUNWAY INCURSION avoidance
____ ____ ____ ADM/SRM and risk management
____ ____ ____ LAHSO

EMERGENCY PROCEDURES √ *(Oral review)*

____ ____ ____ Fire—startup, engine or electrical in-flight, cabin
____ ____ ____ Icing—structural inflight, static port blockage, carb ice
____ ____ ____ Electrical malfunctions
____ ____ ____ Forced landing—*power, no power*

PREFLIGHT

____ ____ ____ Cockpit √
____ ____ ____ Certificates and documents—ARROW
____ ____ ____ Preflight inspection checklist √
____ ____ ____ Aircraft servicing

STARTUP

____ ____ ____ Engine start √
____ ____ ____ Comm radio setup
____ ____ ____ Runup √

TAXI (if required)

____ ____ ____ Taxi √ / Taxi brief
____ ____ ____ Taxi clearance
____ ____ ____ Positive exchange of controls
____ ____ ____ Taxiing—*wind, speed, hazards*
____ ____ ____ Traffic avoidance

TAKEOFF / CLIMB

____ ____ ____ Takeoff √
____ ____ ____ Takeoff clearance
____ ____ ____ Takeoff—*normal, crosswind, aborted, air or hover*
____ ____ ____ Climbs √—with turns, Cs (Vx, Vy, cruise)

CROSSWIND, If required

____ ____ ____ Checks traffic
____ ____ ____ Levels off at assigned altitude

DOWNWIND, If required

____ ____ ____ Tracks straight downwind ± *wind*
____ ____ ____ Landing √
____ ____ ____ Checks traffic and wind
____ ____ ____ Holds altitude
____ ____ ____ Landing clearance
____ ____ ____ Begins descent

BASE

____ ____ ____ Turns 90° ± *wind*
____ ____ ____ Checks traffic
____ ____ ____ Speed

LANDING

____ ____ ____ Landings—normal, crosswind, steep
____ ____ ____ Go around √
____ ____ ____ Touchdown—*drift*
____ ____ ____ Taxi clearance
____ ____ ____ Runway incursion avoidance
____ ____ ____ Shutdown √

PRIVATE PILOT LESSON 13
(SOLO)SOLO
(CONTINUED)

POSTFLIGHT

____ ____ ____ Postflight inspection of aircraft

____ ____ ____ Dual debrief / Update TCO and logbook

RELEASED FOR SOLO

Date _____ Instructor _____

Date _____ Instructor _____

Date _____ Instructor _____

COMPLETION STANDARDS

The lesson will be complete when all areas have a grade of 2 or better. The standards are as follows:
1. Altitude ±150 feet
2. Headings / rollouts ±15º
3. Airspeed within ±15 knots

Instructor	Student	Date	Acft Type	N#

	Dual Pre/Post	Dual Day	Dual Night	Dual X-Ctry	Dual Inst	Dual Test Prep	Solo Day	Solo X-Ctry	Total Acft	Inst
Previous										
This Lesson										
Total										

Hours		

PRIVATE PILOT LESSON 14—(BRIEFING) CROSS-COUNTRY
OBJECTIVE: The student will demonstrate the ability to plan a VFR, cross-country trip.
TIME: As required.

WEATHER INFORMATION

____ ____ ____ Current weather charts
____ ____ ____ Forecast weather charts
____ ____ ____ Winds aloft reports
____ ____ ____ METARS / TAFs / FDs
____ ____ ____ Wind shear reports
____ ____ ____ PIREPs, SIGMETs, AIRMETs
____ ____ ____ Icing freezing level info

PUBLICATIONS

____ ____ ____ Sectional
____ ____ ____ Aeronautical Info Manual (AIM)
____ ____ ____ Airport / Facility Directories
____ ____ ____ Review appropriate FARs
____ ____ ____ NOTAMS

FLIGHT PLANNING

____ ____ ____ ADM and risk management
____ ____ ____ Drawing the true course (TC)
____ ____ ____ Marking obstructions to flight
____ ____ ____ Measuring TC and mileage
____ ____ ____ Flight log preparation
____ ____ ____ VOR navigation
____ ____ ____ GPS navigation
____ ____ ____ Dead reckoning / Pilotage
____ ____ ____ Magnetic compass
____ ____ ____ Performance charts
____ ____ ____ Fuel planning
____ ____ ____ Weight and balance
____ ____ ____ Go / No-go decisions
____ ____ ____ Alternate plans
____ ____ ____ Filing a VFR flight plan

COMMUNICATIONS

____ ____ ____ Center--*frequencies*
____ ____ ____ Unicom, Multicom
____ ____ ____ Emergency--121.5
____ ____ ____ Position reporting

AIRSPACE

____ ____ ____ Class A-B-C-D-E-G
____ ____ ____ SUAs, TFRs, SFRAs
____ ____ ____ VFR cruising altitudes

EMERGENCY PROCEDURES √ *(Oral review)*

____ ____ ____ Engine failure - hover, *takeoff, after takeoff*
____ ____ ____ Forced landings - power-on, governor
____ ____ ____ Fire - startup, engine or electrical inflight, cabin
____ ____ ____ Icing - structural inflight, static port blockage, carb ice
____ ____ ____ Landing
____ ____ ____ Electrical malfunctions

SYSTEMS AND EQUIPMENT MALFUNCTIONS

____ ____ ____ Partial or complete power loss
____ ____ ____ Engine roughness or overheat
____ ____ ____ Carburetor or induction icing
____ ____ ____ Loss of oil pressure
____ ____ ____ Fuel starvation
____ ____ ____ Electrical malfunction
____ ____ ____ Pitot/static
____ ____ ____ Structural icing
____ ____ ____ Smoke/fire/engine compartment fire
____ ____ ____ Any other emergency appropriate to the aircraft

PRIVATE PILOT LESSON 14
(BRIEFING) CROSS-COUNTRY
(CONTINUED)

NIGHT PREPARATION

____	____	____	Physiology, equipment
____	____	____	Airport lighting systems
____	____	____	Aircraft lighting systems
____	____	____	Orientation, nav, & chart reading
____	____	____	Somatogravic/Black hole approach illusion
____	____	____	Visual scanning
____	____	____	Inadvertent IMC
____	____	____	Risk elements

IN-FLIGHT

____	____	____	Opening the flight plan
____	____	____	Navigation procedures
____	____	____	Navigation log upkeep
____	____	____	Figuring groundspeed and ETE
____	____	____	Lost procedures
____	____	____	Equipment failures

IN-FLIGHT (cont.)

____	____	____	Magnetic compass operations
____	____	____	Weather problems
____	____	____	Reporting weather to FlightWatch
____	____	____	Diversion to an alternate
____	____	____	In-flight visibility estimating

DESTINATION

____	____	____	Aircraft securing
____	____	____	Closing the flight plan
____	____	____	Complete syllabus and logbook

COMPLETION STANDARDS

This lesson will be complete when the student has a thorough understanding of the topics listed, and a grade of 2 or better.

Instructor	Student	Date
_____	_____	_____
_____	_____	_____
_____	_____	_____

COMMENTS

_____

_____

_____

_____

_____

_____

Hours		

PRIVATE PILOT LESSON 15—(DUAL) BASIC INSTRUMENT FLIGHT AND NAVIGATION
OBJECTIVE: The student will learn basic instrument flight and navigation skills. Day or night config.
TIME: Approx 1.2 hrs

PREFLIGHT BRIEFING

____ ____ ____ Wake turbulence / wind shear
____ ____ ____ Weight and balance
____ ____ ____ Collision avoidance
____ ____ ____ RUNWAY INCURSION avoidance
____ ____ ____ Review of all emergency checklists √

PREFLIGHT

____ ____ ____ Cockpit √
____ ____ ____ Certificates and documents—ARROW
____ ____ ____ Preflight inspection checklist √
____ ____ ____ Aircraft servicing

STARTUP

____ ____ ____ Engine start √
____ ____ ____ Comm radio setup
____ ____ ____ Nav radio setup—*freq, ID, set course*

TAKEOFF / CLIMB / CRUISE

____ ____ ____ Takeoff √
____ ____ ____ Takeoff clearance
____ ____ ____ Takeoff—*normal, crosswind, steep*
____ ____ ____ Climbs √

BASIC INSTRUMENT FLIGHT

____ ____ ____ Climbs—with turns
____ ____ ____ Level-off from climbs
____ ____ ____ Scanning
____ ____ ____ Straight and level
____ ____ ____ Level turns to headings
____ ____ ____ Unusual attitude recovery
____ ____ ____ Descents with turns (constant airspeed)
____ ____ ____ Level offs from descents

NAVIGATION

____ ____ ____ VOR/HSI—frequencies, ID, set OBS
____ ____ ____ VOR/HSI—course intercepting
____ ____ ____ VOR/HSI—course tracking
____ ____ ____ VOR/HSI—position locating
____ ____ ____ GPS—entering DIRECT TO identifiers
____ ____ ____ GPS—reading other navigation pages
____ ____ ____ GPS—using the map page
____ ____ ____ GPS—using the NEAREST feature

POSTFLIGHT

____ ____ ____ Shutdown √
____ ____ ____ Update syllabus and logbook

PRIVATE PILOT LESSON 15
(FTD, AATD, BATD, ACFT) BASIC INSTRUMENT FLIGHT AND NAVIGATION
(CONTINUED)

COMPLETION STANDARDS

This lesson will be complete when all areas have a grade of 2 or better. Standards are as follows:
1. Altitude ±200 feet/± 150 feet in traffic pattern
2. Headings and rollouts ±15°
3. Airspeed within ±15 knots

Instructor	Student	Date	Acft Type	N#

	Dual Pre/Post	Dual Day	Dual Night	Dual X-Ctry	Dual Inst	Dual Test Prep	Solo Day	Solo X-Ctry	Total Acft	Inst
Previous										
This Lesson										
Total										

COMMENTS

Hours		

PRIVATE PILOT LESSON 16—(DUAL) CROSS-COUNTRY FLIGHT TRAINING
OBJECTIVE: The student will learn cross-country piloting skills. GPS, pilotage/dead reckoning navigation will be alternated on various legs of the flight.
TIME: 4.0 hours minimum

PREFLIGHT BRIEFING/SPECIAL EMPHASIS AREAS

____ ____ ____ Wake turbulence / wind shear
____ ____ ____ Collision avoidance
____ ____ ____ Weight and balance
____ ____ ____ CFIT/wire strike avoidance
____ ____ ____ Weather planning
____ ____ ____ TFRs, SUAs
____ ____ ____ Flight planning/filing
____ ____ ____ SRM, ADM
____ ____ ____ Aviation security
____ ____ ____ Runway incursion avoidance

EMERGENCY PROCEDURES √ *(Oral review)*

____ ____ ____ Checklist usage
____ ____ ____ Fire—*startup, engine or electrical inflight, cabin*
____ ____ ____ Icing—*structural inflight, static port blockage, carb ice*
____ ____ ____ Electrical malfunctions
____ ____ ____ Off airport emergency landings

PREFLIGHT

____ ____ ____ Cockpit √
____ ____ ____ Certificates and documents—ARROW
____ ____ ____ Preflight inspection checklist √
____ ____ ____ Aircraft servicing

STARTUP

____ ____ ____ Engine start √
____ ____ ____ Rotor engagement

TAXI (if required)

____ ____ ____ Taxi √ / taxi brief
____ ____ ____ Taxi clearance
____ ____ ____ Hover check
____ ____ ____ Traffic awareness

TAKEOFF

____ ____ ____ Takeoff √
____ ____ ____ Takeoff clearance
____ ____ ____ Takeoff—*normal, crosswind, steep*
____ ____ ____ Climbs √—*with turns, Cs (Vx, Vy, cruise)*
____ ____ ____ Pattern departure

BASIC MANEUVERS(VR and IR)

____ ____ ____ Level-off from climb procedure
____ ____ ____ Cruise √
____ ____ ____ Straight and level
____ ____ ____ Turns to headings
____ ____ ____ Engine check / traffic check

NAVIGATION

____ ____ ____ Open flight plan
____ ____ ____ VOR intercepting, tracking
____ ____ ____ GPS intercepting, tracking
____ ____ ____ Pilotage, dead reckoning
____ ____ ____ Use of magnetic compass
____ ____ ____ Autopilot / flight director—if applicable
____ ____ ____ Ground speed calculation
____ ____ ____ Navigation log usage
____ ____ ____ Diversion / lost procedures
____ ____ ____ Brief expected taxi route
____ ____ ____ Descents √—*turns, Cs, best glide*
____ ____ ____ Level offs from descent

EMERGENCY PROCEDURES √ *(Practical review)*

____ ____ ____ Engine failure—*takeoff, after takeoff, inflight, hover*
____ ____ ____ Forced landings—*power, no power*

PRIVATE PILOT LESSON 16
(DUAL) CROSS-COUNTRY FLIGHT TRAINING
(CONTINUED)

LANDING

____	____	____	Approach—*location, communication*
____	____	____	Approach—*tower, no tower*
____	____	____	Pattern entry, if appropriate
____	____	____	Landing √
____	____	____	Landing clearance
____	____	____	Stabilized approach
____	____	____	Go around √
____	____	____	Landings—hover, set down
____	____	____	Positive aircraft control
____	____	____	Touchdown
____	____	____	Taxi clearance
____	____	____	Taxi √—*wind, speed, hazards, hover, air*
____	____	____	Shutdown √

POSTFLIGHT

____	____	____	Shutdown √
____	____	____	Close flight plan
____	____	____	Debrief
____	____	____	Update syllabus and logbook
____	____	____	Initial solo cross-country flight endorsement

Flight Leg	Route
Pilotage/ DR:	
VOR:	
GPS:	
Number of Takeoffs and Landings (10 min): _____	

COMPLETION STANDARDS

This lesson will be complete when all areas have a grade of 2 or better. Standards are as follows:
1. Altitude ±200 feet/traffic pattern ±150 feet
2. Headings ±15°
3. Airspeed within ±15 knots
4. Touchdown within 6 feet, no aft movement
5. Hover ±1/2 of altitude of recommended within 10 feet of surface

Instructor	Student	Date	Acft Type	N#
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

	Dual Pre/Post	Dual Day	Dual Night	Dual X-Ctry	Dual Inst	Dual Test Prep	Solo Day	Solo X-Ctry	Total Acft	Inst
Previous										
This Lesson										
Total										

Hours		

PRIVATE PILOT LESSON 17—(DUAL) NIGHT MANEUVERS AND CROSS-COUNTRY NAVIGATION
OBJECTIVE: The student will practice night piloting skills, 10 full stop takeoffs and landings in the pattern, and a dual cross-country flight of more than 50 nautical miles total distance.
TIME: 3.0 hours minimum of night instruction

PREFLIGHT BRIEFING/SPECIAL EMPHASIS AREAS

____ ____ ____ SRM, ADM and risk management
____ ____ ____ Weight and balance
____ ____ ____ Aircraft lighting systems
____ ____ ____ Airport lighting systems
____ ____ ____ Night navigation
____ ____ ____ Wake turbulence / wind shear
____ ____ ____ Collision avoidance
____ ____ ____ Weather planning/TFRs, SUAs
____ ____ ____ Flight planning/filing
____ ____ ____ LAHSO
____ ____ ____ Runway incursion avoidance
____ ____ ____ CFIT/wire strike avoidance
____ ____ ____ Personal equipment
____ ____ ____ Aviation security

EMERGENCY PROCEDURES √ *(Oral review)*

____ ____ ____ Fire—startup, engine or electrical inflight, cabin
____ ____ ____ Icing—structural inflight, static port blockage, carb ice
____ ____ ____ Electrical malfunctions

PREFLIGHT

____ ____ ____ Cockpit √
____ ____ ____ Certificates and documents—ARROW
____ ____ ____ Preflight inspection checklist √
____ ____ ____ Aircraft servicing

STARTUP

____ ____ ____ Engine start √
____ ____ ____ Comm radio setup—*freq, vol, transmitter*
____ ____ ____ Rotor engagement
____ ____ ____ Runup √

TAXI (if required)

____ ____ ____ Taxi √ / taxi brief
____ ____ ____ Taxi clearance

TAXI (Cont.)

____ ____ ____ Positive exchange of controls
____ ____ ____ Taxi—*wind, hazards, hover, air*
____ ____ ____ Traffic awareness

TAKEOFF

____ ____ ____ Takeoff √
____ ____ ____ Takeoff clearance
____ ____ ____ Takeoff—*normal, crosswind, steep*
____ ____ ____ Climbs √—with turns
____ ____ ____ Pattern departure

BASIC MANEUVERS (VR and IR)

____ ____ ____ Level-off from climb procedure
____ ____ ____ Cruise √
____ ____ ____ Straight and level
____ ____ ____ Turns to headings
____ ____ ____ Engine check / traffic check

NAVIGATION

____ ____ ____ Open flight plan
____ ____ ____ VOR intercepting, tracking
____ ____ ____ GPS intercepting, tracking
____ ____ ____ Pilotage, dead reckoning
____ ____ ____ Ground speed calculation
____ ____ ____ Navigation log usage
____ ____ ____ Brief expected taxi route/Air taxi route
____ ____ ____ Diversion / lost procedures
____ ____ ____ Use of magnetic compass
____ ____ ____ Descents √—*turns, Cs*
____ ____ ____ Level offs from descent

PRIVATE PILOT LESSON 17
(DUAL) NIGHT MANEUVERS AND CROSS-COUNTRY NAVIGATION
(CONTINUED)

EMERGENCY PROCEDURES √ *(Practical review)*

____ ____ ____ Engine failure—hover, takeoff run, after takeoff, inflight

____ ____ ____ Forced landings—*power, no power*

____ ____ ____ Emergency landing

LANDING

____ ____ ____ Approach—*location, communications*

____ ____ ____ Approach—*tower, no tower*

____ ____ ____ Pattern entry

____ ____ ____ Landing √

____ ____ ____ Traffic pattern

____ ____ ____ Landing clearance

____ ____ ____ Stabilized approach

____ ____ ____ Go around √

LANDING (cont.)

____ ____ ____ Night landings—normal, crosswind, steep

____ ____ ____ Positive aircraft control

____ ____ ____ Touchdown— drift, point

____ ____ ____ Taxi clearance

____ ____ ____ Taxi √

____ ____ ____ Shutdown √

POSTFLIGHT

____ ____ ____ Postflight inspection of aircraft

____ ____ ____ Debrief / Update syllabus and logbook

Flight Leg	Route
Pilotage/ DR:	
VOR:	
GPS:	
Number of Takeoffs and Landings (10 min): _____	

COMPLETION STANDARDS

This lesson will be complete when all areas have a grade of 2 or better. Standards are as follows:
Altitude ±200 feet/traffic pattern ±150 feet

1. Headings ±15°
2. Airspeed within ±15 knots
3. Hover within 6 feet of designated point, no aft movement

Instructor	Student	Date	Acft Type	N#
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

	Dual Pre/Post	Dual Day	Dual Night	Dual X-Ctry	Dual Inst	Dual Test Prep	Solo Day	Solo X-Ctry	Total Acft	Inst
Previous										
This Lesson										
Total										

Hours		

PRIVATE PILOT LESSON 18—(DUAL) STAGE TWO CHECK (CROSS-COUNTRY)
OBJECTIVE: The student will demonstrate the ability to plan and fly cross-country flights.
TIME: Approximately 1.0 hour.

PREFLIGHT BRIEFING

____ ____ ____ Cross-country oral
____ ____ ____ ADM and risk management
____ ____ ____ Weight and balance

EMERGENCY PROCEDURES √ *(Oral review)*

____ ____ ____ Fire—startup, engine or electrical inflight, cabin
____ ____ ____ Icing—structural inflight, static port blockage, carb ice
____ ____ ____ Electrical malfunctions
____ ____ ____ Emergency landing

PREFLIGHT

____ ____ ____ Cockpit √
____ ____ ____ Certificates and documents—ARROW
____ ____ ____ Preflight inspection checklist √
____ ____ ____ Aircraft servicing

STARTUP

____ ____ ____ Engine start √
____ ____ ____ Rotor engagement
____ ____ ____ Comm radio setup—*freq, vol, transmitter*
____ ____ ____ Nav radio setup—*freq, ID, set course*

TAXI

____ ____ ____ Taxi √ / taxi brief
____ ____ ____ Taxi clearance
____ ____ ____ Positive exchange of controls
____ ____ ____ Taxi—*wind, speed, hazards, hover, air*
____ ____ ____ Traffic awareness
____ ____ ____ Runup √

TAKEOFF

____ ____ ____ Takeoff
____ ____ ____ Takeoff clearance
____ ____ ____ Takeoff—*normal, crosswind, steep*
____ ____ ____ Climbs √—with turns
____ ____ ____ Pattern departure, as required

BASIC MANEUVERS

____ ____ ____ Level-off from climb
____ ____ ____ Cruise √
____ ____ ____ Engine check / traffic check

NAVIGATION

____ ____ ____ Open flight plan
____ ____ ____ VOR intercepting, tracking
____ ____ ____ GPS intercepting, tracking
____ ____ ____ Pilotage, dead reckoning
____ ____ ____ Ground speed calculation
____ ____ ____ Navigation log usage
____ ____ ____ In-flight radio resources
____ ____ ____ Diversion / lost procedures
____ ____ ____ Use of magnetic compass
____ ____ ____ Descents √

EMERGENCY PROCEDURES √ *(Practical review)*

____ ____ ____ Engine failure—hover, takeoff, after takeoff, inflight
____ ____ ____ Forced landings—power, no power,
____ ____ ____ Emergency landing

PRIVATE PILOT LESSON 18
(DUAL) STAGE TWO CHECK (CROSS-COUNTRY)
(CONTINUED)

LANDING

____	____	____	Approach—*location, communication*
____	____	____	Approach—*tower, no tower*
____	____	____	Pattern entry
____	____	____	Landing √
____	____	____	Traffic pattern
____	____	____	Landing clearance
____	____	____	Stabilized approach
____	____	____	Go around √
____	____	____	Landings—*normal, crosswind, steep*
____	____	____	Positive aircraft control
____	____	____	Touchdown
____	____	____	Taxi clearance
____	____	____	Taxi √—*wind, speed, hazards, hover, air*
____	____	____	Shutdown √

POSTFLIGHT

____	____	____	Postflight inspection of aircraft
____	____	____	Debrief / Update syllabus and logbook

Flight Leg	Route
Pilotage/ DR:	
VOR:	
GPS:	

COMPLETION STANDARDS

This lesson will be complete when all areas have a grade of 2 or better. Standards are as follows:
1. Altitude ±200 feet/TP ±125 feet
2. Headings ±15°
3. Airspeed within ±10 knots
4. Remain within 5 feet of designated point
5. Hover ±1/2 assigned altitude, no aft drift

Instructor	Student	Date	Acft Type	N#
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

	Dual Pre/Post	Dual Day	Dual Night	Dual X-Ctry	Dual Inst	Dual Test Prep	Solo Day	Solo X-Ctry	Total Acft	Inst
Previous										
This Lesson										
Total										
		(26.0)	**(3.0)**	**(5.0)**	**(1.0)**	**(0)**	**(±2.0)**	**(0)**	**(±28.5)**	**()**

PRIVATE PILOT LESSON 15
STAGE TWO CROSS-COUNTRY CHECK

COMMENTS

RECOMMENDATIONS

1 ❑ This stage check performance indicates that additional review is necessary.

A. Do Review Lessons on all items marked “1” until your Instructor indicates a satisfactory “2”.

B. Insert the Review Lesson sheets following this page.

C. Return to a check instructor.

Check Instructor _____ **Student** _____ **Date** _____

2 ❑ This stage check was performed in a satisfactory manner. Move on to the next stage.

Check Instructor _____ **Student** _____ **Date** _____

PRIVATE PILOT CERTIFICATION

STAGE THREE
Lessons 19 - 23

Training Course Outline

4.0 hours (approx) of dual flight training of which (approx)
3.0 hours flight training in preparation for the practical test must be within 2 calendar months of the date of the test.

3.0 hours (approx) of solo flight training
Three (3) takeoffs and landings to a full stop with each landing involving a flight in the traffic pattern at an airport with an operating control tower.

Stage Three Objectives

Students will review all aspects of their flight training.

Stage Three Completion Standards

This stage will be complete when the student has satisfactorily completed an end-of-course evaluation to Private Pilot Rotorcraft Helicopter Practical Test Standards.

Hours		

PRIVATE PILOT LESSON 19—(SOLO) CROSS-COUNTRY SOLO FLIGHT
OBJECTIVE: The student will plan and fly a daytime cross-country flight of at least 100 nm, with landings at a minimum of 3 points, one segment of the flight consisting of a straight-line distance of at least 25 nm between the takeoff and landing locations.
TIME: ***Minimum 3.0 hours.***

PREFLIGHT BRIEFING - DUAL

____ ____ ____ SRM, ADM and risk management
____ ____ ____ Weight and balance
____ ____ ____ Wake turbulence/wind shear
____ ____ ____ Awareness and situations leading to unanticipated yaw, yaw control in approach (Guimbal SL 12-001)
____ ____ ____ Collision avoidance
____ ____ ____ Weather planning
____ ____ ____ TFRs and SUAs
____ ____ ____ Flight planning
____ ____ ____ LAHSO
____ ____ ____ Review of all emergency checklists
____ ____ ____ CFIT/wire strike avoidance
____ ____ ____ Diversion / lost procedures
____ ____ ____ Checklist usage
____ ____ ____ Check endorsements

EMERGENCY PROCEDURES √ *(Oral review)*

____ ____ ____ Engine failure—hover, takeoff, after takeoff, inflight
____ ____ ____ Forced landings—*power, no power*
____ ____ ____ Emergency landing

PREFLIGHT

____ ____ ____ Cockpit √
____ ____ ____ Certificates and documents—ARROW
____ ____ ____ Preflight inspection √
____ ____ ____ Aircraft servicing

STARTUP

____ ____ ____ Engine start
____ ____ ____ Comm radio setup—*freq, vol, trans*
____ ____ ____ Nav radio setup—*freq, ID, set course*
____ ____ ____ Rotor engagement

TAXI

____ ____ ____ Taxi √ / taxi brief
____ ____ ____ Taxi clearance
____ ____ ____ Begin taxi
____ ____ ____ Taxi—*wind, speed, hazards, hover, air*
____ ____ ____ Traffic awareness

TAKEOFF

____ ____ ____ Takeoff √
____ ____ ____ Takeoff clearance
____ ____ ____ Takeoff—*normal, crosswind, steep*
____ ____ ____ Climbs √—with turns, Cs
____ ____ ____ Pattern departure

BASIC MANEUVERS

____ ____ ____ Level-off from climb
____ ____ ____ Cruise √
____ ____ ____ Engine check / traffic check

NAVIGATION

____ ____ ____ Open flight plan
____ ____ ____ Course intercepting, tracking
____ ____ ____ Pilotage, dead reckoning, radio
____ ____ ____ Ground speed calculation
____ ____ ____ Navigation log usage
____ ____ ____ In-flight radio resources

PRIVATE PILOT LESSON 19
(SOLO) CROSS-COUNTRY SOLO FLIGHT
(CONTINUED)

LANDING

____	____	____	Approach—*location, communication*
____	____	____	Approach—*tower, no tower*
____	____	____	Pattern entry—45°, if appropriate
____	____	____	Landing √
____	____	____	Traffic pattern
____	____	____	Landing clearance
____	____	____	Stabilized approach
____	____	____	Landings—*normal, crosswind, steep*
____	____	____	Taxi clearance
____	____	____	Runway incursion avoidance
____	____	____	Taxi √—*wind, speed, hazards*
____	____	____	Shutdown √

POSTFLIGHT

____	____	____	Postflight inspection of aircraft
____	____	____	Dual debrief / Update syllabus and logbook

RELEASED FOR SOLO

Date _____ Instructor _____

Flight Route

COMPLETION STANDARDS

This lesson will be complete when all areas have a grade of 2 or better. Standards are as follows:
1. Altitude ±200 feet/TP ±150 feet
2. Headings ±15°
3. Airspeed within ±10 knots
4. Remain within 5 feet of assigned point
5. Hover ±1/2 POH

Instructor	Student	Date	Acft Type	N#
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

	Dual Pre/Post	Dual Day	Dual Night	Dual X-Ctry	Dual Inst	Dual Test Prep	Solo Day	Solo X-Ctry	Total Acft	Inst
Previous										
This Lesson										
Total										

Hours		

PRIVATE PILOT LESSON 20—(DUAL) REVIEW OF MANEUVERS AND NAVIGATION
OBJECTIVE: Instructor and student will review all areas of flight training listed below.
TIME: Approx 1.0 hours of flight instruction

PREFLIGHT BRIEFING /SPECIAL EMPHASIS AREAS

____ ____ ____ Discussion of lesson
____ ____ ____ SRM, ADM and risk management
____ ____ ____ Weight and balance
____ ____ ____ Wake turbulence / wind shear
____ ____ ____ CFIT/wire strike avoidance
____ ____ ____ Collision avoidance
____ ____ ____ Positive aircraft control
____ ____ ____ RUNWAY INCURSION avoidance
____ ____ ____ LAHSO

EMERGENCY PROCEDURES √ *(Oral review)*

____ ____ ____ Checklist usage
____ ____ ____ Fire—*startup, engine or electrical inflight, cabin*
____ ____ ____ Icing—*structural inflight, static port blockage, carb ice*
____ ____ ____ Electrical malfunctions
____ ____ ____ Emergency landing

PREFLIGHT

____ ____ ____ Cockpit √
____ ____ ____ Certificates and documents—ARROW
____ ____ ____ Preflight inspection √
____ ____ ____ Aircraft servicing

STARTUP

____ ____ ____ Engine start √
____ ____ ____ Comm radio setup—*freq, vol, trans*
____ ____ ____ Nav radio setup—*freq, ID, set course*
____ ____ ____ Rotor engagement

TAXI (If required)

____ ____ ____ Taxi √ / taxi brief
____ ____ ____ Taxi clearance
____ ____ ____ Positive exchange of controls
____ ____ ____ Taxi—*wind, speed, hazards, hover, air*
____ ____ ____ Traffic awareness
____ ____ ____ Runup √

TAKEOFF / CLIMB / CRUISE

____ ____ ____ Takeoff √
____ ____ ____ Takeoff clearance
____ ____ ____ Takeoff—*normal, crosswind, steep*
____ ____ ____ Climbs √ - *with turns, Cs, VR-IR*
____ ____ ____ Traffic pattern departure
____ ____ ____ Level-off from climb—*VR-IR*
____ ____ ____ Cruise √—*VR-IR*
____ ____ ____ *Engine checks, traffic checks*

NAVIGATION

____ ____ ____ Opening flight plan
____ ____ ____ VOR intercepting, tracking
____ ____ ____ GPS intercepting, tracking
____ ____ ____ Pilotage, dead reckoning
____ ____ ____ Diversion / use of compass

ADVANCED MANEUVERS

____ ____ ____ Emerg landing area, clearing turns
____ ____ ____ Straight-in auto's
____ ____ ____ Hover auto
____ ____ ____ 180° auto
____ ____ ____ Rapid deceleration

EMERGENCY PROCEDURES √ *(Practical review)*

____ ____ ____ Engine failure—*hover*, *takeoff, after takeoff, inflight*
____ ____ ____ Forced landings—*power, no power*
____ ____ ____ Emergency landing
____ ____ ____ Slope Operations
____ ____ ____ Anti-torque system failures—Identification and Recovery
____ ____ ____ Low rotor RPM recognition and recovery
____ ____ ____ Settling with power/vortex ring state

PRIVATE PILOT LESSON 20
(DUAL) REVIEW OF MANEUVERS AND NAVIGATION
(CONTINUED)

LANDING

____ ____ ____ Approach—*location, communication*
____ ____ ____ Pattern entry
____ ____ ____ Landing √
____ ____ ____ Landing clearance
____ ____ ____ Traffic pattern, as required
____ ____ ____ Stabilized approach—*steep, normal*
____ ____ ____ Go around √
____ ____ ____ Landings—*normal, crosswind*
____ ____ ____ Taxi √
____ ____ ____ Shutdown √

POSTFLIGHT

____ ____ ____ Postflight inspection of aircraft
____ ____ ____ Debrief / Update syllabus and logbook

COMPLETION STANDARDS

This lesson will be complete when all areas have a grade of 2 or better. Standards are as follows:
1. Altitude ±200 feet/traffic pattern ±100 feet
2. Headings ±10°
3. Airspeed within ±10 knots
4. Remain within 4 feet of selected point, hover
5. Hover altitude ±1/2 POH

Instructor _____ Student _____ Date _____ Acft Type _____ N# _____

_____ _____ _____ _____ _____

_____ _____ _____ _____ _____

_____ _____ _____ _____ _____

	Dual Pre/Post	Dual Day	Dual Night	Dual X-Ctry	Dual Inst	Dual Test Prep	Solo Day	Solo X-Ctry	Total Acft	Inst
Previous										
This Lesson										
Total										

Hours		

PRIVATE PILOT LESSON 21—(DUAL) STUDENT REVIEW OF MANEUVERS
OBJECTIVE: The student will practice piloting skills for tasks assigned by the instructor.
TIME: Approx 1.0 hours of dual flight practice.

PREFLIGHT BRIEFING - DUAL

____ ____ ____ Review of all emergency checklists
____ ____ ____ Endorsements
____ ____ ____ SPECIAL EMPHASIS AREAS

PREFLIGHT

____ ____ ____ Cockpit √
____ ____ ____ Certificates and documents—ARROW
____ ____ ____ Preflight inspection √
____ ____ ____ Airplane servicing

STARTUP

____ ____ ____ Engine start √
____ ____ ____ Comm radio setup—*freq, vol, transmit-ter*
____ ____ ____ Nav radio setup—*freq, ID, set course*
____ ____ ____ Rotor engagement

TAXI (if required)

____ ____ ____ Taxi √
____ ____ ____ Taxi clearance
____ ____ ____ Taxiing—*wind, speed, hazards, hover, air*
____ ____ ____ Traffic awareness

TAKEOFF

____ ____ ____ Takeoff √
____ ____ ____ Takeoff clearance
____ ____ ____ Takeoff—*normal, crosswind, steep*
____ ____ ____ Climbs √
____ ____ ____ Pattern departure

BASIC MANEUVERS

____ ____ ____ Level-off from climb
____ ____ ____ Cruise √
____ ____ ____ Straight and level
____ ____ ____ Level turns to headings
____ ____ ____ Tracking a straight line
____ ____ ____ Engine check / traffic check
____ ____ ____ Descents √—with turns, Cs, best glide
____ ____ ____ Normal Approach
____ ____ ____ Steep Approach
____ ____ ____ Go-around

LANDING

____ ____ ____ Approach—*location, communication*
____ ____ ____ Pattern entry
____ ____ ____ Landing √
____ ____ ____ Landing clearance
____ ____ ____ Traffic pattern, as appropriate
____ ____ ____ Stabilized approach
____ ____ ____ Landings—*normal, crosswind, steep*
____ ____ ____ Taxi clearance
____ ____ ____ Runway incursion avoidance
____ ____ ____ Taxi √—*wind, speed, hazards, hover, air*
____ ____ ____ Shutdown √

PRIVATE PILOT LESSON 21
(DUAL) STUDENT REVIEW OF MANEUVERS
(CONTINUED)

POSTFLIGHT

____ ____ ____ Postflight inspection of aircraft

____ ____ ____ Dual debrief / Update syllabus and log-book

RELEASED FOR SOLO

Date _____ Instructor _____

Date _____ Instructor _____

Date _____ Instructor _____

COMPLETION STANDARDS

This lesson will be complete when the student has practiced all the noted maneuvers.

Instructor	Student	Date	Acft Type	N#

	Dual Pre/Post	Dual Day	Dual Night	Dual X-Ctry	Dual Inst	Dual Test Prep	Solo Day	Solo X-Ctry	Total Acft	Inst
Previous										
This Lesson										
Total										

Hours		

PRIVATE PILOT LESSON 22—(BRIEFING) PRE-EVALUATION ORAL
OBJECTIVE: The student will demonstrate the knowledge necessary to act as Private Pilot.
TIME: As required.

CERTIFICATES—STUDENT

____ ____ ____ Syllabus correct
____ ____ ____ Verification of student certificate
____ ____ ____ Verification of medical certificate
____ ____ ____ Completing 8710 Form/ IACRA
____ ____ ____ Endorsements

PILOT QUALIFICATIONS

____ ____ ____ Currency, privileges, limitations
____ ____ ____ Documents & ID requirements
____ ____ ____ Logbook/Record keeping
____ ____ ____ Compensation
____ ____ ____ Medical certificates
____ ____ ____ Drugs and alcohol/IMSAFE
____ ____ ____ Risk elements

AIRWORTHINESS REQUIREMENTS

____ ____ ____ Certificates
____ ____ ____ Inspections
____ ____ ____ Preventative maintenance
____ ____ ____ Required equipment
____ ____ ____ Inoperative equipment
____ ____ ____ Special flight permit
____ ____ ____ Risk elements

WEATHER INFORMATION

Adverse Conditions:

____ ____ ____ TFRs
____ ____ ____ Closed/Unsafe NOTAMs
____ ____ ____ WST/WS/WA/UUA/CWA

Current Weather:

____ ____ ____ METARs/UAs
____ ____ ____ Wx depiction/Surf. analysis chart
____ ____ ____ Radar & radar summary chart

Forecasts:

____ ____ ____ TAF/FD
____ ____ ____ Surface/SIGWX prog. charts

Forecasts: (continued)

____ ____ ____ Convective outlook

General:

____ ____ ____ En route weather/Wx sources
____ ____ ____ NOTAMs (D and FDC)
____ ____ ____ Meteorology (i.e. Wx Theory)
____ ____ ____ Risk elements

CROSS-COUNTRY FLIGHT PLANNING

____ ____ ____ Route planning & checkpoints
____ ____ ____ Applying UTC and time zones
____ ____ ____ Pilotage and dead reckoning
____ ____ ____ Time, speed, and distance
____ ____ ____ True airspeed & density altitude
____ ____ ____ Planned vs. Actual Calculations
____ ____ ____ Magnetic compass errors
____ ____ ____ Power setting selection
____ ____ ____ Terms: MC, TC, TH, MH, CH
____ ____ ____ Fuel planning
____ ____ ____ Altitudes and obstacles
____ ____ ____ Sectional and symbology
____ ____ ____ Activating/Closing flight plans
____ ____ ____ Ground-based navigation
____ ____ ____ GPS, RAIM, WAAS
____ ____ ____ Radar services/assistance
____ ____ ____ Diversion and lost procedures
____ ____ ____ Risk elements

NATIONAL AIRSPACE SYSTEM

____ ____ ____ Types of airspace and classes
____ ____ ____ Requirements and restrictions
____ ____ ____ SUA, SFRA, and other airspace
____ ____ ____ Risk elements

PRIVATE PILOT LESSON 22
(BRIEFING) PRE-EVALUATION ORAL
(CONTINUED)

PERFORMANCE AND LIMITATIONS

____	____	____	Charts, tables, and data
____	____	____	Factors affecting performance
____	____	____	Loading on performance
____	____	____	Weight and balance
____	____	____	Aerodynamics
____	____	____	Risk elements

OPERATION OF SYSTEMS

____	____	____	Primary flight controls
____	____	____	Powerplant and rotors
____	____	____	Fuel, oil
____	____	____	Electrical
____	____	____	Avionics
____	____	____	Pitot-static, vacuum/pressure & associated flight instruments
____	____	____	Environmental
____	____	____	Deicing and anti-Icing
____	____	____	Normal operation
____	____	____	Common errors
____	____	____	Abnormal operation
____	____	____	Risk elements

HUMAN FACTORS

____	____	____	Hypoxia
____	____	____	Hyperventilation
____	____	____	Middle ear and sinus problems
____	____	____	Spatial disorientation
____	____	____	Motion sickness
____	____	____	Carbon monoxide poisoning
____	____	____	Stress and fatigue
____	____	____	Dehydration and nutrition

HUMAN FACTORS (continued)

____	____	____	Hypothermia
____	____	____	Optical illusions
____	____	____	Alcohol, drugs, OTC meds
____	____	____	ADM & hazardous attitudes
____	____	____	Collision avoidance
____	____	____	Risk elements

COMMUNICATIONS AND LIGHT GUN SIGNALS

____	____	____	Obtaining frequencies
____	____	____	Communication procedures and phraseology
____	____	____	Transponders
____	____	____	Radar assistance
____	____	____	Lost communication procedures
____	____	____	Automated WX and airport info
____	____	____	Risk elements

TRAFFIC PATTERNS

____	____	____	Towered/Non-towered operations
____	____	____	Runway selection
____	____	____	Right-of-way rules
____	____	____	Wake turbulence
____	____	____	Runway incursion avoidance
____	____	____	Risk elements

NIGHT PREPARATION

____	____	____	Physiology, equipment
____	____	____	Airport lighting systems
____	____	____	Aircraft lighting systems
____	____	____	Orientation, nav, & chart reading
____	____	____	Somatogravic/Black hole approach illusion
____	____	____	Visual scanning
____	____	____	Inadvertent IMC
____	____	____	Risk elements

PRIVATE PILOT LESSON 22
(BRIEFING) PRE-EVALUATION ORAL
(CONTINUED)

EMERGENCY OPERATIONS

____	____	____	Emergency landing
____	____	____	Glide speed vs. distance
____	____	____	Energy management
____	____	____	Wind and effects
____	____	____	Emergency procedures
____	____	____	Communications
____	____	____	ELTs: Operation/Limitations/Tests
____	____	____	Radar assistance/Transponders
____	____	____	Minimum fuel
____	____	____	Emergency equipment
____	____	____	Climate extremes (Hot/Cold)

System and Equipment Malfunction:

____	____	____	Partial or complete power loss
____	____	____	Engine roughness or overheat
____	____	____	Carburetor or induction icing
____	____	____	Loss of oil pressure
____	____	____	Fuel starvation
____	____	____	Electrical malfunction
____	____	____	Pitot/Static system malfunction
____	____	____	Structural icing
____	____	____	Smoke/Fire/Engine compartment fire
____	____	____	Any other emergency appropriate to the aircraft
____	____	____	Risk elements for all emergency operations

COMPLETION STANDARDS

The student must demonstrate sufficient knowledge in the lesson areas to rate at least a 3 on each item.

Instructor	Student	Date
_____	_____	_____
_____	_____	_____
_____	_____	_____

PRIVATE PILOT LESSON 23—(DUAL) FINAL REVIEW LESSON
OBJECTIVE: Instructor and student will review the areas of flight training noted below.
TIME: Approx 2.0 hours of flight instruction

Hours		

PREFLIGHT BRIEFING

Aircraft lighting systems
Airport lighting systems
Night navigation
Wake turbulence / wind shear
LTE – Awareness and conditions leading to loss of Anti Torque effectiveness
Collision avoidance
Weather planning
Flight planning/filing

EMERGENCY PROCEDURES √ *(Oral review)*

Fire—*startup, engine or electrical in-flight, cabin*
Icing—*structural inflight, static port blockage, carb ice*
Systems and equipment malfunctions

PREFLIGHT

Cockpit √
Certificates and documents—ARROW
Preflight inspection checklist √
Aircraft servicing
Risk elements

STARTUP

Engine start √
Comm radio setup—*freq, vol, transmitter*
Nav radio setup—*freq, ID, set course*
Rotor engagement
Risk elements

TAXI

Taxi √ / taxi brief
Taxi clearance
Positive exchange of controls
Taxi—*wind, hazards, hover, air*
Traffic awareness
Runup √
Risk elements

TAKEOFF / CLIMB / CRUISE

Takeoff √
Takeoff clearance
Climbs √—*with turns, Cs*
Traffic pattern departure
Level-off from climb
Cruise √
Risk elements

NAVIGATION

GPS intercepting, tracking
Pilotage, dead reckoning
Risk elements

Helicopter MANEUVERS

Vertical take-off and landing
Slope operations
Hover taxi
Air taxi
Normal Take-off
Maximum performance T/O
Steep approach
Confined area operations
Pinnacle/Platform
Shallow approach and run on landing
Anti-Torque system failure– Hover, Forward Flight
LTE—uncommanded yaw awareness and corrective input
Go-around
Rapid deceleration
Straight-in autorotation
180° autorotation
Hover auto
Low rotor RPM recovery
Settling with power

PRIVATE PILOT LESSON 23
(DUAL) FINAL REVIEW LESSON
(CONTINUED)

EMERGENCY PROCEDURES √ *(Practical review)*

____ ____ ____ Emergency landing

____ ____ ____ Engine failure—*hover*, *takeoff, after takeoff, inflight*

____ ____ ____ Forced landings—*power, no power*

____ ____ ____ Systems and equipment malfunctions

____ ____ ____

____ ____ ____ Risk elements

LANDING

____ ____ ____ Approach—*location, communication*

____ ____ ____ Pattern entry

____ ____ ____ Landing √

____ ____ ____ Landing clearance

____ ____ ____ Taxi clearance

____ ____ ____ Runway incursion avoidance

____ ____ ____ Shutdown √

____ ____ ____ Risk elements

POSTFLIGHT

____ ____ ____ Postflight inspection / close flight plan—if opened

Debrief / update syllabus and logbook

____ ____ ____

____ ____ ____ Risk elements

COMPLETION STANDARDS

This lesson will be complete when all areas have met the Practical Test √ Standards and have a grade of 3.

Instructor	Student	Date	Acft Type	N#
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

	Dual Pre/Post	Dual Day	Dual Night	Dual X-Ctry	Dual Inst	Dual Test Prep	Solo Day	Solo X-Ctry	Total Acft	Inst
Previous										
This Lesson										
Total										
		(+30)	**(3.0)**	**(5.0)**	**(1.0)**		**(5.0)**	**(3.0)**	**(35)**	

PRIVATE PILOT END-OF-COURSE EVALUATION
OBJECTIVE: The applicant will display the knowledge, skills and risk management elements to become a Private Pilot.
TIME: As required for thorough evaluation.

Student _____ Examiner _____ Date _____

Note:

The evaluator must assess the applicant on all skill elements for each task included in each area of operation of the PTS unless otherwise noted. The evaluator must also assess at least one knowledge element and one risk management element in each task, focusing on any task element(s) the applicant missed on the knowledge exam.

EVALUATION PRELIMINARIES

____	____	____	Drivers license—*picture ID*
____	____	____	Student certificate—*current*
____	____	____	Medical certificate—*current*
____	____	____	8710 Form—*correct, dated, signed*
____	____	____	Knowledge test report—*current*
____	____	____	Certificate of Enrollment—*current*
____	____	____	Training Course Outline—*completed*
____	____	____	Ground school completion—*verified*

I. PREFLIGHT PREPARATION

____	____	____	Pilot qualifications
____	____	____	Airworthiness requirements
____	____	____	Weather information
____	____	____	Weight and balance
____	____	____	Cross-Country flight planning
____	____	____	National Airspace System
____	____	____	Performance and limitations
____	____	____	Operation of systems
____	____	____	Human factors

II. PREFLIGHT PROCEDURES

____	____	____	Preflight assessment
____	____	____	Cockpit management
____	____	____	Engine starting
____	____	____	Rotor engagement
____	____	____	Taxiing
____	____	____	Before takeoff check

III. AIRPORT OPERATIONS

____	____	____	Com and Light Gun Signals
____	____	____	Traffic patterns

IV. TAKEOFFS, LANDINGS, GO-AROUNDS

____	____	____	Normal, steep, crosswind takeoff and climb
____	____	____	Normal, steep and crosswind approach and landing
____	____	____	Shallow approach
____	____	____	Maximum performance T/O
____	____	____	Running T/O
____	____	____	Slope landing
____	____	____	Go-around/Rejected landing
____	____	____	Confined Area Operations

V. PERFORMANCE MANEUVERS

____	____	____	Rapid deceleration
____	____	____	Straight in autorotation
____	____	____	180° autorotation

VI. NAVIGATION

____	____	____	Pilotage and dead reckoning
____	____	____	Navigation systems and radar
____	____	____	Diversion
____	____	____	Lost procedures

VII. EMERGENCY PROCEDURES

____	____	____	Power failure at hover/altitude
____	____	____	Settling with power
____	____	____	Anti-torque failure
____	____	____	Ground resonance

PRIVATE PILOT END-OF-COURSE EVALUATION (CONTINUED)

VIII. BASIC MANEUVERS

____ ____ ____ Straight and level
____ ____ ____ Constant airspeed climbs
____ ____ ____ Constant airspeed descents
____ ____ ____ Turns to headings
____ ____ ____ Radio communications

IX. EMERGENCY OPERATIONS

____ ____ ____ Emergency approach and landing
____ ____ ____ Emergency equip and survival gear
____ ____ ____ Systems and equipment malfunctions

Systems and Equipment Malfunction: Select 3 Skills

____ ____ ____ Partial or complete power loss
____ ____ ____ Engine roughness or overheat
____ ____ ____ Carburetor or induction icing
____ ____ ____ Loss of oil pressure
____ ____ ____ Fuel starvation
____ ____ ____ Electrical malfunction
____ ____ ____ Pitot/Static system malfunction
____ ____ ____ Structural icing
____ ____ ____ Smoke/Fire/Engine compartment fire

____ ____ ____ Any other emergency appropriate to the aircraft

X. NIGHT OPERATIONS

____ ____ ____ Night preparation

XI. POSTFLIGHT PROCEDURES

____ ____ ____ Parking and securing

COMPLETION STANDARDS

A student pilot must meet the FAA Private Pilot Practical Test Standards on this evaluation before being awarded a Private Pilot Certificate.

ATTEMPT 1

Examiner _____

Student _____

Date _____

Oral Time _____

Flight Time _____

ATTEMPT 2

Examiner _____

Student _____

Date _____

Oral Time _____

Flight Time _____

ATTEMPT 3

Examiner _____

Student _____

Date _____

Oral Time _____

Flight Time _____

TOTAL ORAL TEST TIME [ ]

TOTAL FLIGHT TEST TIME [ ]

AIRCRAFT N # [ ]

PRIVATE PILOT END-OF-COURSE EVALUATION
CRITIQUE

COMMENTS

1 ❑ This end-of-course evaluation performance indicates that additional review is necessary.

A. Do Review Lessons on all items marked “1” until your Instructor indicates a satisfactory “3”.

B. Insert the Review Lesson sheets following this page.

C. Return to a check instructor.

Chief / Asst Chief Instructor _____ **Student** _____ **Date** _____

2 ❑ This End-of-Course evaluation was performed in a satisfactory manner.

Chief / Asst Chief Instructor _____ **Student** _____ **Date** _____

MEMORANDUM

Date: [Insert Date]

To: [Insert Name], Chief Flight Instructor; University of Dubuque
[Insert Name], Chief Ground Instructor; University of Dubuque

From: [Insert Name], Part 141 – Private Pilot Ground Instructor

RE: Private Pilot Ground School Completion

The following students have successfully completed all the requirements for the Private Pilot Helicopter Ground School Course as detailed in the Private Pilot Helicopter TCO pursuant to Part 141, Appendix B. This ground school included three stage exams as well as an end-of-course exam, with scores of 80 percent or greater. All exams are then corrected to 100 percent:

NAME	DOB MM/DD/YYYY	NAME	DOB MM/DD/YYYY

Respectfully,

[Insert Name],
[Title],
University of Dubuque Aviation Department

PRIVATE PILOT CERTIFICATION
Ground Training Course

Hours

Stage 1—approx 12 hours of ground training
Stage 2—approx 12 hours of ground training
Stage 3—approx 12 hours of ground training
Students will receive a minimum of 36 hours of ground training.

Objective

The objective of the ground training course is to provide students with the necessary aeronautical knowledge required to meet the prerequisites specified in 14 CFR 61 and 141 for the FAA Private Pilot Knowledge Examination.

Completion Standards

Students will meet the ground training course completion standards by demonstrating through a combination of oral tests, written tests, and school records, that they meet the prerequisites specified in 14 CFR 61 and 141, and have the knowledge necessary to pass the FAA Private Pilot Knowledge Examination. A passing grade of 80% on all stage examinations and an end-of-course examination will be required for completion.

PRIVATE PILOT CERTIFICATION

STAGE 1
12 hours approx of **Ground Training Course** ground training

Lessons 1-6

Objectives

The student will be introduced to pilot training, human factors in aviation, aerodynamic principles, and the flight environment. The student will also obtain a basic knowledge of safety of flight, airports, aeronautical charts, airspace, radio communications, and air traffic control services, including the use of radar. The student will learn radio procedures and the common sources of flight information.

Stage Completion Standards

This stage is complete when the student has completed the stage written examination with a minimum score of 80%. The instructor will review each incorrect response with the student to ensure understanding before the student progresses to the next stage.

LESSON 1

TIME 2 Hours

OBJECTIVES

⇒ Become familiar with pilot training and human factors in aviation.
⇒ Understand the school's pilot training program.

PILOT TRAINING

— How to Get Started
— Role of the FAA
— Fixed-Base Operators
— Eligibility Requirements
— Types of Training Available
— Phases of Training
— Private Pilot Privileges & Limitations

HUMAN FACTORS

— Aeronautical Decision Making
— Crew Resource Management / SRM Training
— Pilot-In-Command Responsibility
— Communication
— Resource Use
— Workload Management
— Situational Aviation
— Aviation Physiology
— Alcohol, Drugs, and Performance
— Fitness For Fight

LESSON COMPLETION STANDARDS

The student will demonstrate understanding during oral or written quizzing by the instructor at the completion of the lesson. A pass rate of 80% corrected to 100% is required.

ASSIGNED READING

Reading for the next lesson will be assigned as required.

LESSON 2

TIME 2 Hours

OBJECTIVES

⇒ Understand aircraft components and systems.
⇒ Understand instrument functions and operating characteristics, including errors and common malfunctions.
⇒ Understand powerplant and related systems.

HELICOPTER

— Fuselage
— Rotors
— Empennage
— Landing Gear
— Engine / Transmission
— Pilot's Operating Handbook (POH)
— Safety Notices for Aircraft

POWERPLANT AND RELATED SYSTEMS

— Reciprocating Engine
— Induction Systems
— Supercharging and Turbocharging
— Ignition Systems
— Fuel Systems
— Refueling
— Oil Systems
— Cooling Systems
— Exhaust Systems
— Main Rotor and AntiTorque Systems
— Effects related to Pilot Input of Main Rotor and Anti Torque system
— Rotor Hazards
— Electrical Systems

FLIGHT INSTRUMENTS

— Piot-Static Instruments
— Gyroscopic Instruments
— Magnetic Compass
— Electronic Instruments

LESSON COMPLETION STANDARDS

The student will demonstrate understanding during oral or written quizzing by the instructor at the completion of the lesson. A pass rate of 80% corrected to 100% is required.

ASSIGNED READING

Reading for the next lesson will be assigned as required.

LESSON 3

TIME 2 Hours

OBJECTIVES

⇒ Understand the four forces of flight, aerodynamics, principles of stability, maneuvering flight, and load factor.
⇒ Understand aerodynamic characteristics as they relate to helicopters.
⇒ Understand the importance of prompt aircraft control.

FOUR FORCES OF FLIGHT

— Lift
— Weight
— Thrust
— Drag
— Ground Effect IN/OUT
— Airfoils
— Control of Lift
— Gyroscopic Procession
— Coriolis Effect

STABILITY

— Three Axes of Flight
— Longitudinal Stability
— Center of Gravity Position
— Lateral Stability
— Directional Stability

AERODYNAMICS OF MANEUVERING FLIGHT

— Climbing Flight
— Turning Tendencies
— Descending Flight
— Turning Flight
— Load Factor
— Transition into Forward Flight
— Retreating Blade Stall
— Dissymmetry of Lift

LESSON COMPLETION STANDARDS

The student will demonstrate understanding during oral or written quizzing by the instructor at the completion of the lesson. A pass rate of 80% corrected to 100% is required.

ASSIGNED READING

Reading for the next lesson will be assigned as required.

LESSON 4

TIME 2 Hours

OBJECTIVES

⇒ Understand important safety considerations, including collision avoidance precautions, right-of-way rules, and minimum safety altitudes.
⇒ Understand airport markings and lightings, aeronautical charts, and types of airspace.
⇒ Understand collision avoidance procedures and runway incursion avoidance.

SAFTEY OF FLIGHT

— Collision Avoidance / Visual Scanning
— Airport Operations
— Right-of-Way Rules
— Minimum Safety Altitudes
— Taxiing in Wind
— Positive Exchange of Flight Controls

AIRPORT

— Controlled and Uncontrolled
— Runway Layout
— Traffic Pattern
— Airport Visual Aids
— Taxiway Markings
— Ramp Area Hand Signals
— Runway Incursion Avoidance
— Airport Lighting
— Visual Glidescope Indicators
— Approach Light Systems
— Pilot-Controlled Lighting

AERONAUTICAL CHARTS

— Latitude and Longitude - Projections
— Sectional Charts - World Aeronautical Charts
— Chart Symbology

AIRSPACE

— Classifications - Uncontrolled Airspace—Class G
— Controlled Airspace - Class A, B, C, D, E
— Special VFR - Special Use Airspace
— Other Airspace - Emergency Air Traffic Rules
— Air Defense Identification Zones
— Temporary Flight Restrictions

LESSON COMPLETION STANDARDS

The student will demonstrate understanding during oral or written quizzing by the instructor at the completion of the lesson. A pass rate of 80% corrected to 100% is required.

LESSON 5

TIME 2 Hours

OBJECTIVES

⇒ Understand radar, transponder operations, and FAA radar and services for VFR aircraft.
⇒ Understand the services provided by a FSS.
⇒ Understand the use of radio for communications.
⇒ Understand the sources of flight information, i.e., the AIM, and FAA advisory publications.

RADAR AND ATC SERVICES

— Radar
— Transponder Operations
— ADS-B
— Automatic Terminal Information Services
— Flight Service Stations

RADIO PROCEDURES

— VHF Communications Equipment
— Phonetic Alphabet
— Coordinated Universal Time
— Common Traffic Advisory Frequency (CTAF)
— ATC Facilities and Controlled Airports
— Lost Communications Procedures
— Emergency Procedures
— Emergency Locator Transmitters (ELT)

SOURCES OF FLIGHT INFORMATION

— Airport Facility Directory
— Federal Aviation Regulations
— Aeronautical Information Manual
— Notices To Airmen
— Advisory Circulars

LESSON COMPLETION STANDARDS

The student will demonstrate understanding during oral or written quizzing by the instructor at the completion of the lesson. A pass rate of 80% corrected to 100% is required.

ASSIGNED READING

Reading for the next lesson will be assigned as required.

LESSON 6 - STAGE EXAMINATION

TIME 2 Hours

OBJECTIVES

⇒ Demonstrate comprehension of the materials presented in Lessons 1 through 5.

EXAMINATION

— Aircraft Systems
— Aerodynamic Principles
— The Flight Environment
— Communication and Fight Information

LESSON COMPLETION STANDARDS

This lesson and stage are complete when the student has completed the stage examination with a minimum grade of 80%. The instructor will review each incorrect response with the student to ensure understanding before the student progresses to the next stage.

ASSIGNED READING

Reading for the next lesson will be assigned as required.

PRIVATE PILOT CERTIFICATION

STAGE 2

12 hours approx of **Ground Training Course** ground training

Lessons 7-10

Objectives

Students will become familiar with weather theory, typical weather patterns, and various weather hazards. In addition, the student will learn how to obtain and interpret various weather reports and forecasts. Students will become familiar with the FARs as they apply to private pilot operations.

Stage Completion Standards

This stage is complete when the student has completed the stage written examination with a minimum score of 80%. The instructor will review each incorrect response with the student to ensure understanding before the student progresses to the next stage.

LESSON 7

TIME 3 Hours

OBJECTIVES

⇒ Understand various weather conditions, frontal systems and hazardous weather phenomena.
⇒ Understand how to recognize critical weather situations from the ground and during flight, including hazards associated with thunderstorms and wind shear.

BASIC WEATHER THEORY

— Atmosphere
— Atmospheric Circulation
— Atmospheric Pressure
— Coriolis Force
— Global Wind Patterns
— Local Wind Patterns

WEATHER PATTERNS

— Atmospheric Stability
— Temperature Inversions
— Moisture
— Humidity
— Dewpoint
— Clouds and Fog
— Precipitation
— Air Masses
— Fronts

WEATHER HAZARDS

— Thunderstorms
— Turbulence
— Wake Turbulence Recognition & Avoidance
— Wind Shear Recognition & Avoidance
— Microbursts
— Icing
— Restrictions to Visibility
— Volcanic Ash

LESSON COMPLETION STANDARDS

The student will demonstrate understanding during oral or written quizzing by the instructor at the completion of the lesson. A pass rate of 80% corrected to 100% is required.

ASSIGNED READING

Reading for the next lesson will be assigned as required.

LESSON 8

TIME 3 Hours

OBJECTIVES

⇒ Understand the appropriate Federal Aviation Regulations applicable to Private Pilot certification.
⇒ Understand FARs that govern student solo flight operations, required pre-flight actions, private pilot privileges and limitations, and National Transportation Safety Board (NTSB) accident reporting requirements.

14 CFR PART 1

14 CFR PART 61

14 CFR PART 91

NTSB 830

LESSON COMPLETION STANDARDS

The student will demonstrate understanding during oral or written quizzing by the instructor at the completion of the lesson. A pass rate of 80% corrected to 100% is required.

ASSIGNED READING

Reading for the next lesson will be assigned as required.

LESSON 9

TIME 3 Hours

OBJECTIVES

⇒ Understand how to obtain and interpret weather reports, forecasts, and charts.
⇒ Understand the sources of weather during preflight planning and while in flight.
⇒ Recognize critical weather situations described by weather reports and forecasts.

THE FORECASTING PROCESS

— Forecasting Methods
— Types of Forecasts
— Compiling and Processing Weather Data
— Forecasting Accuracy and Limitations

PRINTED REPORTS AND FORECASTS

— Routine Aviation Weather Reports (METARs)
— Radar Weather Reports
— Pilot Weather Reports
— Terminal Airport Forecasts (TAFs)
— Aviation Area Forecasts (FAs)
— Severe Weather Reports and Forecasts
— AIRMET, SIGMET, Convective SIGMET

WEATHER CHARTS

— Surface Analysis Charts
— Weather Depiction Charts
— Radar Summary Chart
— Satellite Weather Charts
— Low-Level Significant Weather Prog Chart
— Severe Weather Outlook Chart
— Forecast Winds and Temperatures Aloft Chart
— Volcanic Ash Forecast and Dispersion Chart

SOURCES OF WEATHER INFORMATION

— Cockpit displays of digital weather and aeronautical information
— Preflight Weather Sources
— In-Flight Weather Sources
— Weather Radar Services
— Automated Weather Reporting Services

LESSON COMPLETION STANDARDS

The student will demonstrate understanding during oral or written quizzing by the instructor at the completion of the lesson. A pass rate of 80% corrected to 100% is required.

ASSIGNED READING

Reading for the next lesson will be assigned as required.

LESSON 10

TIME 3 Hours

OBJECTIVES

⇒ Demonstrate comprehension of the materials presented in Lessons 7 through 9.

EXAMINATION

— Meteorology for Pilots
— Federal Aviation Regulations
— Interpreting Weather Data

LESSON COMPLETION STANDARDS

The student will demonstrate understanding during oral or written quizzing by the instructor at the completion of the lesson. A pass rate of 80% corrected to 100% is required.

ASSIGNED READING

Reading for the next lesson will be assigned as required.

PRIVATE PILOT CERTIFICATION

STAGE 3
12 hours approx of **Ground Training Course** ground training

Lessons 11-15

Objectives

The student will be introduced to aircraft performance, weight and balance information, and cross-country flight planning. The student will also obtain a basic knowledge of aviation physiology and decision-making.

Stage Completion Standards

This stage is complete when the student has completed the stage written examination with a minimum score of 80%. The instructor will review each incorrect response with the student to ensure understanding before the student progresses to the next stage. Additionally, the student must successfully pass the end-of-course examination with a minimum grade of 80% to earn the instructor's endorsement for the FAA Private Pilot Airman Knowledge Test.

LESSON 11

TIME 2 Hours

OBJECTIVES

⇒ Understand use of data supplied by the manufacturer to predict aircraft performance, including takeoff and landing , and fuel requirements.
⇒ Understand how to compute and control the weight and balance condition of a helicopter.
⇒ Understand how to perform basic flight planning calculations.
⇒ Understand the effects of atmospheric conditions on aircraft performance.

PREDICTING PERFORMANCE

— Aircraft Performance and Design
— Chart Presentations
— Factors Affecting Performance
— Effects of Density Altitude and Take-off and Climb Performance
— Takeoff and Landing Performance
— Tail Rotor Performance—Takeoff and Landing, Reducing the onset of LTE. Reference: GUIMBAL SL 12 -001
— Climb Performance
— Cruise Performance
— Using Performance Charts

WEIGHT AND BALANCE

— Importance of Weight
— Importance of Balance
— Terminology
— Principles of Weight and Balance
— Computation Method
— Table Method
— Graphical Method
— Weight-Shift Formula
— Effects of Operating at High Total Weights
— Flight at Various CG Positions

FLIGHT COMPUTERS

— Mechanical Flight Computers
— Time, Speed, and Distance
— Airspeed and Density Altitude Computations
— Wind Problems - Conversions
— Multi-Part Problems
— Electronic Flight Computers
— Modes and Basic Operations

LESSON COMPLETION STANDARDS

The student will demonstrate understanding during oral or written quizzing by the instructor at the completion of the lesson. A pass rate of 80% corrected to 100% is required.

ASSIGNED READING

Reading for the next lesson will be assigned as required.

LESSON 12

TIME 2 Hours

OBJECTIVES

⇒ Understand navigation by pilotage and dead reckoning.
⇒ Understand basic VOR theory and use.
⇒ Understand basic GPS theory and use.
⇒ Understand the basics of other navigation systems.

PILOTAGE AND DEAD RECKONING

— Pilotage - Dead Reckoning
— Flight Planning - VFR Cruising Altitudes
— Flight Plan - Lost Procedures

VOR NAVIGATION

— VOR Operations
— Ground and Airborne Equipment
— Basic Procedures
— Orientation and Navigation
— Checkpoints and Test Signals
— Precautions
— Horizontal Situation Indicator
— Distance Measuring Equipment

SATELITE BASED NAVIGATION

— Equipment
— Regulations
— Authorized use and databases
— Receiver Autonomous Integrity Monitoring (RAIM)

LESSON COMPLETION STANDARDS

The student will demonstrate understanding during oral or written quizzing by the instructor at the completion of the lesson. A pass rate of 80% corrected to 100% is required.

ASSIGNED READING

Reading for the next lesson will be assigned as required.

LESSON 13

TIME 2 Hours

OBJECTIVES

⇒ Understand the importance of physiological factors related to private pilot operations.
⇒ Understand aeronautical decision making and judgement, and risk management.
⇒ Understand accepted procedures and concepts pertaining to cockpit resource management, and human factors training.

AVIATION PHYSIOLOGY

— Vision in Flight
— Night Vision
— Optical Illusions
— Spatial Disorientation
— Respiration
— Hypoxia
— Hyperventilation
— Dehydration and Nutrition
— Middle Ear and Sinus Blockage
— Motion Sickness
— Stress and Fatigue
— Hypothermia
— Effects of alcohol, drugs, and over-the-counter medications and associated regulations
— Effects of dissolved nitrogen in the bloodstream of a pilot or passenger in flight following scuba diving

AERONAUTICAL DECISION MAKING

— Applying the Decision making Process
— Pilot-in-Command Responsibility
— Effects of hazardous attitudes on Aeronautical Decision Making
— Communication
— Workload Management
— Situational Awareness
— Resource Use
— Applying Human Factor Training
— Establishing Personal Minimums
— Pilot /Aircraft Interface: pilot monitoring duties and interaction with charts and avionics equipment

LESSON COMPLETION STANDARDS

The student will demonstrate understanding during oral or written quizzing by the instructor at the completion of the lesson. A pass rate of 80% corrected to 100% is required.

ASSIGNED READING

Reading for the next lesson will be assigned as required.

LESSON 14

TIME 2 Hours

OBJECTIVES

⇒ Understand the cross-country planning process.
⇒ Understand the details of flying a cross-country flight, including the evaluation in-flight weather and making decisions on alternative actions, such as diversions and precautionary landings.
⇒ Understand how to plan for an alternative.

FLIGHT PLANNING

— Developing the Route
— Preflight Weather Briefing
— Preflight actions to include take-off and landing distances, weather reports and forecasts, fuel requirements
— Completing the Navigation Log
— Flight Plan
— Plan for alternates and delays
— Preflight Inspection

THE FLIGHT

— Departure
— Enroute
— Diversion
— Arrival

LESSON COMPLETION STANDARDS

The student will demonstrate understanding during oral or written quizzing by the instructor at the completion of the lesson. A pass rate of 80% corrected to 100% is required.

ASSIGNED READING

Reading for the next lesson will be assigned as required.

LESSON 15

TIME 2 Hours

OBJECTIVES

⇒ Demonstrate comprehension of the materials presented in Lessons 11 through 14.

EXAMINATION

— Aircraft Performance
— Navigation
— Human Factors Principles
— Aeronautical Decision Making
— Cross-Country Flight Planning

LESSON COMPLETION STANDARDS

This lesson and stage are complete when the student has completed the stage examination with a minimum score of 80%. The instructor will review each incorrect response with the student to ensure complete understanding before the student progresses to the end-of-course examination.

UNIVERSITY OF DUBUQUE
PRIVATE PILOT GROUND SCHOOL
END-OF-COURSE EXAMINATION

TIME 2 Hours

OBJECTIVES

⇒ Demonstrate comprehension of the material presented in this course and the student's readiness to complete the FAA Private Pilot Rotorcraft Helicopter Knowledge Test.

EXAMINATION

— Private Pilot Ground School Final Examination

LESSON COMPLETION STANDARDS

The student must complete the Private Pilot end-of-course examination with a minimum score of 80%.

University of Dubuque

Certificate of Graduation

This certifies that

Student Full Name

has satisfactorily completed:
1—each required stage of the course of training, including the tests for those stages;
2—all cross-country flight training required for the course of training;
3—all other course requirements for the course of training as noted in FAR Part 141;
and has graduated from the Federal Aviation Administration approved

Private Pilot Rotorcraft Helicopter Certification Course

conducted by the University of Dubuque, School Number GV8S178Q.

UNIVERSITY of DUBUQUE
UD
AVIATION

Date of Graduation

I certify that the above statements are true.

Chief Flight Instructor