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

FTN #

University of Dubuque / 2000 University Ave / Dubuque, IA 52001

AIR AGENCY CERTIFICATE NO. GV8S178Q

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 1	2/15/2019
6	Original	4/9/2018
7	Revision 1	2/15/2019
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
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APPROVED 2/15/19 DSM-FSDO
BY Kate Saggio

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 are 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 Adam Eggerman #3912099.

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

Other airports may be selected by a student, but 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
Training Course Outline

STAGE ONE

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
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 failures
____ ____ ____ 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

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 √

ADVANCED MANEUVERS

_____ _____ _____ Communication procedures
_____ _____ _____ Traffic pattern— crosswind, downwind, base, final
_____ _____ _____ Emergency procedures
_____ _____ _____ 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

PRIVATE PILOT LESSON 8— (BRIEFING) PRE-SOLO
(CONTINUED)

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
Training Course Outline

STAGE TWO

Lessons 10 –18

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

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

____ ____ ____ Taxi clearance

____ ____ ____ Runway incursion avoidance

____ ____ ____ Shutdown √

POSTFLIGHT

____ ____ ____ Postflight inspection of aircraft

____ ____ ____ Dual debrief / Update TCO and logbook

PRIVATE PILOT LESSON 10

(DUAL AND SOLO) DUAL REVIEW AND FIRST SOLO (CONTINUED)

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
Training Course Outline

STAGE THREE

Lessons 19 - 23

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

_____ _____ _____ 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 block-age, 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

_____ _____ _____ PMC, 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

GROUND REFERENCE

_____ _____ _____ Clearing turns, emerg landing area, PMC
_____ _____ _____ Rectangular patterns
_____ _____ _____ Turns around a point
_____ _____ _____ S-Turns

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
_____	_____	_____
_____	_____	_____
_____	_____	_____

Hours		

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

PREFLIGHT BRIEFING

____	____	____	Aircraft lighting systems
____	____	____	Airport lighting systems
____	____	____	Night navigation
____	____	____	Wake turbulence / wind shear
____	____	____	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, trans-mitter*
____	____	____	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
____	____	____	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

POSTFLIGHT

____	____	____	Postflight inspection / close flight plan—if opened
			Debrief / update syllabus and logbook
____	____	____	
____	____	____	Risk elements

LANDING

____	____	____	Approach—*location, communication*
____	____	____	Pattern entry
____	____	____	Landing √
____	____	____	Landing clearance
____	____	____	Taxi clearance
____	____	____	Runway incursion avoidance
____	____	____	Shutdown √
____	____	____	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
Ground Training Course

STAGE 1

12 hours approx of 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)

POWERPLANT AND RELATED SYSTEMS

— Reciprocating Engine
— Induction Systems
— Supercharging and Turbocharging
— Ignition Systems
— Fuel Systems
— Refueling
— Oil Systems
— Cooling Systems
— Exhaust Systems
— Main and Tail Rotor
— 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
Ground Training Course

STAGE 2

12 hours approx of 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
Ground Training Course

STAGE 3

12 hours approx of 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
— 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