



UNIVERSITY *of* DUBUQUE

INSTRUMENT RATING
Helicopter
TRAINING COURSE OUTLINE



UNIVERSITY *of* DUBUQUE

INSTRUMENT RATING Helicopter TRAINING COURSE OUTLINE

UNIVERSITY *of* DUBUQUE

This is to certify that

is enrolled in the FAA approved
**INSTRUMENT RATING COURSE
ROTORCRAFT—HELICOPTER**
conducted at the University of Dubuque
School #GV8S178Q

Enrollment Date

Primary Flight Instructor

Chief Flight Instructor

INSTRUMENT RATING COURSE

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

FTN # _____

Pilot's Legal Name _____ L DA 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 _____
Private Pilot Certificate No. _____ Date Issued _____
Last Flight Review: Date _____

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 _____ HOOD _____
X-C DUAL _____ ACTUAL IFR _____
FLIGHT TRAINING DEVICE _____

EVALUATION

DATE _____
FLIGHT / ORAL BY _____ 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.

<u>Page</u>	<u>Revision</u>	<u>Revision Date</u>
1	<u>Original</u>	<u>6-1-2018</u>
2	<u>Original</u>	<u>6-1-2018</u>
3	<u>Original</u>	<u>6-1-2018</u>
4	<u>Original</u>	<u>6-1-2018</u>
5	<u>Revision 1</u>	<u>6-1-2019</u>
6	<u>Revision 1</u>	<u>6-1-2019</u>
7	<u>Revision 2</u>	<u>11-13-2020</u>
8	<u>Original</u>	<u>6-1-2018</u>
9	<u>Original</u>	<u>6-1-2018</u>
10	<u>Original</u>	<u>6-1-2018</u>
11	<u>Original</u>	<u>6-1-2018</u>
12	<u>Original</u>	<u>6-1-2018</u>
13	<u>Original</u>	<u>6-1-2018</u>
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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

Instrument Rating Course—Helicopter

This Training Course Outline meets all the curriculum requirements for the Instrument Rating Course contained in Appendix C 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 an Instrument Rating; 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 an Instrument Rating; Helicopter category.

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 Babka Flight Center, 10656 Airport Road, located at the Dubuque Regional Airport, Dubuque, Iowa 52003. 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 6' by 7' and 14 additional office/training rooms with a maximum number of two students per area. Each briefing/training room will have communications capabilities for contacting a Flight Service Station. The building has Wi Fi capabilities for students and instructors to access weather and flight planning applications online.

GROUND INSTRUCTIONAL FACILITIES

The primary ground instructional facilities are in the Babka Flight Center, located at the Dubuque Regional Airport, Dubuque, Iowa 52003. This facility has three classrooms with a capacity of 24 students in each. The building and rooms are heated, lighted, and ventilated to conform to local building, sanitation, and health codes.

Based on enrollment and class formats, ground schools may also be conducted on the main campus of the University of Dubuque located at 2000 University Avenue, Dubuque, Iowa 52001. The University of Dubuque is accredited by the North Central Association of the Council for Higher Education. The University's classrooms meet the requirements of the Association and conform to local building, sanitation and health codes. Campus classrooms and computer labs are available in the Myers Library, Blades Hall, Alumni Hall, Dunlap Technology Center, MTAC, Mercer-Birmingham, and the University Science Center. Classrooms range in size from 142 seats in the Dunlap Technology Center to 6 seats in the Myers library.

GROUND INSTRUCTIONAL EQUIPMENT / TRAINING AIDS

Training aids and equipment used may include the following: Whiteboards, televisions, podium, LCD/Overhead projector with screen, laptop and/or desktop and/or tablet computers, computer/video interface units for TV/LCD projector. Other aids may include airplane models, airplane parts, instrument panel posters, aviation software, multiple aviation websites, E6B flight computer, plotter, navigation charts, Instrument Terminal Procedures, and EFB's. These aids and equipment will be kept accurate and current for the relevant course of training.

AIRCRAFT

Guimbal Cabri G2 and Robinson R44 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 Instrument Rating Course meets the requirements for Chief Instructor as listed in the 14 CFR 141.35 and has been approved by the local FAA Flight Standards District Office.

Flight Instructors will have a current Certified Flight Instructor, Helicopter—Instrument. All Flight Instructors will receive standardization training prior to teaching in this course. Additionally, Flight Instructors will receive annual flight standardization training.

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. All requested appointees will meet the requirements of the appropriate sections of 14 CFR 141, Subpart B.

CHIEF AND ASSISTANT CHIEF INSTRUCTORS

The Chief Flight Instructor for the Instrument Rating Course is Zarick Kuehl, certificate #3741286. There are no Assistant Chief Flight Instructors assigned to this course.

ENROLLMENT PREREQUISITES

Students must be able to write, read, speak, and understand the English language and possess a Private Pilot Certificate with an aviation medical certificate prior to enrolling in the flight portion of the Instrument Rating Course.

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 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 61 PILOT TRAINING

Flight credit may be transferred from 14 CFR 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. Upon successful completion of the evaluation the student will proceed to the next stage of flight training. Student stage evaluations will be conducted by an approved Chief Flight Instructor, Assistant Chief Flight Instructor, or Stage Check Instructor. Stage check instructors are not authorized to perform end-of-course evaluations

MINIMUM INSTRUMENT RATING FLIGHT TRAINING

	Simulated or Actual Instrument	TOTAL
STAGE 1	20.0	20.0
STAGE 2	15.0	15.0
TOTALS	35.0	35.0

Total minimum Instrument Rating flight training time is 35.0 hours.

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

GENERAL LESSON NOTES

Lesson items that are in italics are for instructor and check pilot guidance.

AIRPORTS USED

The airports listed below are approved for use by the University of Dubuque, 14 CFR Part 141 Instrument Instructors and Instrument students for the purpose of instrument training, to satisfy the requirements of the school's Instrument Pilot Rating TCO. Mileage to these airports is indicated. Instructors must ensure that all airports used meet the requirements of Title 14 CFR Part 141.38 (c) (d) (e).

IOWA

- Cedar Rapids (CID) - 54
- Independence (IIB) - 55
- Oelwein (OLZ) - 58
- Vinton (VTI) - 60
- Monticello (MXO) - 26
- Maquoketa (OQW) - 22
- Clinton (CWI) - 35
- Davenport (DVN) - 42

ILLINOIS

- Freeport (FEP) - 50
- Moline (MLI) - 58
- Sterling (SQI) - 60
- Savanna (SFY) - 31

WISCONSIN

- Reedsburg (C35) - 65
- Monroe (EFT) - 51
- Lone Rock (LNR) - 54
- Madison (MSN) - 53
- Praire Du Chien (PDC) - 43

**AP-
PROVED
CROSS-
COUNTRY
ROUTES**

At least one
cross-
country

flight with a minimum distance of 100 nm along airways or ATC directed routing to include at least 50 nm straight line distance between airports and three different kinds of instrument approaches.

- KDBQ—KCID—KVTI—KDBQ
- KDBQ—KIOW—KMXO—KDBQ
- KDBQ—KEFT—KPDC—KDBQ

Other cross-country routes can be flown at the discretion of the flight instructor and must meet the requirements of CFR Title 14 Part 141 Appendix C 4 (C) (2).

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

ACs—convective outlook
acft—aircraft
AI—Altitude Indicator
airspd—airspeed
alt—altitude
approx—approximately
ARROW—Airworthiness, Registration, Radio license (international), Operator's manual, Weight and balance
ATC—Air Traffic Control
AWW—severe weather forecast alert
CG—Center of gravity
Comm—communication
config—configuration
Cs—Constant speed
CWAs—Center Weather Advisory
cx—correction
DA—Decision Altitude
DH—Decision Height
dist—distance
DME—Distance Measuring Equipment
EFC—Expect Further Clearance
equip—equipment
ETA—Estimated Time of Arrival
FAA—Federal Aviation Administration
FAs—area forecasts
FAF—Final Approach Fix
FDs—winds and temperatures aloft forecast
freq / freqs—frequency / frequencies
FSS—Flight Service Station
FTD—Flight Training Device
GPS—Global Positioning System
hdg—heading
HI—Horizontal Indicator
hr—hour
IAF—Initial Approach Fix
IDs—Identifications
IF—Intermediate Fix
inop—inoperative
inst—flight solely by reference to instruments while using a view limiting device
LR—Lead Radial
MAP—Missed Approach Procedure
MDA—Minimum Descent Altitude
METARs—aviation routine weather reports
MLC—Modified Landing Checklist
MRA—Manufacturer's Recommended Airspeed
Nav—navigation
nm—nautical miles
obs—omni bearing selector

ABBREVIATIONS

ops—operations
PCATD—Personal Computer Aviation Training Device
PIREPs—pilot weather reports
pre—before
prep—preparation
PT—Procedure Turn
pwr—power
req—required
TACs—Terminal Area Charts
TC—True Course
TAFs—Terminal Area Forecasts
TWEB—Transcribed Weather Broadcast
SDs—Scanning Detectors
VHF—Very High Frequency
VR-IR—integrated flight training using visual and instrument reference
vol—volume
VOR—Very high frequency, Omni-directional, Radio range
Vx—best angle of climb
Vy—best rate of climb
WAs—airmet
WACs—World Aeronautical Charts
WSs—sigmet
WSTs—convective sigmet
WW—severe weather watch bulletin
xctry—cross country
xmitter—transmitter
xwind—cross wind
»—the aircraft checklist will be used

INSTRUMENT RATING

STAGE ONE Training Course Outline

Initial Flight Training
Lessons 1—12

20.0 hours (approx) of Aircraft dual instrument flight training

Stage One Objectives

The student will be instructed in basic instrument flying, tracking and intercepting, holding, and approach procedures.

Stage One Completion Standards

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

Hours

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INSTRUMENT LESSON 1

BRIEFING—COURSE OVERVIEW AND BASIC INSTRUMENT FLIGHT

OBJECTIVE: The instructor will brief the student on course content, the airport environment and basic instrument flight procedures.

TIME: As required

COURSE OVERVIEW

- ___ ___ ___ Student operations manual
- ___ ___ ___ Instrument rating syllabus
- ___ ___ ___ Standardization Manual
- ___ ___ ___ Enrollment paperwork
- ___ ___ ___ Practical Test Standards

AIR TRAFFIC CONTROL FACILITIES

- ___ ___ ___ Tower
- ___ ___ ___ Communication frequencies
- ___ ___ ___ Navigation facilities

AIRPORT ENVIRONMENT

- ___ ___ ___ Runways
- ___ ___ ___ Runway markings
- ___ ___ ___ Taxiways
- ___ ___ ___ Taxiway markings
- ___ ___ ___ RUNWAY INCURSIONS
- ___ ___ ___ HOLD SHORT LINES (Clearances)
- ___ ___ ___ Ramp areas
- ___ ___ ___ Ramp markings

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

_____	_____	_____
_____	_____	_____
_____	_____	_____

AIRPORT SERVICES

- ___ ___ ___ UD Flight Operations facility
- ___ ___ ___ Airport administrative facilities
- ___ ___ ___ Airport maintenance facilities
- ___ ___ ___ Airport security
- ___ ___ ___ Aircraft maintenance facilities
- ___ ___ ___ Fueling facilities
- ___ ___ ___ Weather facilities
- ___ ___ ___ Aircraft storage facilities
- ___ ___ ___ Flight practice areas

BASIC INSTRUMENT FLIGHT PROCEDURES

- ___ ___ ___ The IFR flight instruments
- ___ ___ ___ Scanning methods-full panel
- ___ ___ ___ Scanning methods-partial panel
- ___ ___ ___ Basic instrument flight
- ___ ___ ___ Straight and level
- ___ ___ ___ Turns (standard rate and timed)
- ___ ___ ___ Climbs
- ___ ___ ___ Descents
- ___ ___ ___ Intercepting and tracking
- ___ ___ ___ Holding
- ___ ___ ___ Approaches
- ___ ___ ___ Communications

POSTBRIEF

- ___ ___ ___ Update TCO

Hours

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**INSTRUMENT LESSON 2
BASIC INSTRUMENT FLIGHT PROCEDURES**

OBJECTIVE: Student will be introduced to and practice basic instrument flying procedures.

TIME: Approx 2.0 hours

EMPHASIS AREAS

- ___ ___ ___ Positive aircraft control
- ___ ___ ___ Positive exchange of flight controls
- ___ ___ ___ LAHSO
- ___ ___ ___ CFIT
- ___ ___ ___ ADM and RM
- ___ ___ ___ Checklist usage

PREFLIGHT BRIEFING

- ___ ___ ___ Documents and required instrument checks
- ___ ___ ___ Wake turb, wind shear, collision avoidance
- ___ ___ ___ Runway incursion avoidance - *call all hold short lines*
- ___ ___ ___ Weather
- ___ ___ ___ Enroute charts, approach plates, sectionals
- ___ ___ ___ Flight equipment—*kneeboard, pencils, etc.*

PREFLIGHT PREPARATION

- ___ ___ ___ Weight and balance
- ___ ___ ___ IFR cockpit —*ARROW*
- ___ ___ ___ Tests—*VOR, Transponder, Alternate-Static, Altimeter, ELT, 121.5 check, RNAV/GPS*
- ___ ___ ___ IFR Preflight Inspection
- ___ ___ ___ IFR cockpit organization

STARTUP

- ___ ___ ___ Engine start
- ___ ___ ___ Comm radio setup—*freq, vol, transmitter*
- ___ ___ ___ Nav radio setup—*freq, ID, set course*
- ___ ___ ___ ATIS—*copy and review*
- ___ ___ ___ IFR clearance

TAXI

- ___ ___ ___ Taxi
- ___ ___ ___ Gyros and compass check
- ___ ___ ___ Flight instrument check

TAKEOFF / CLIMB

- ___ ___ ___ Takeoff
- ___ ___ ___ Climb 500' then "on course"
- ___ ___ ___ Tower handoff / Center check-in
- ___ ___ ___ Center clearance

BASIC INSTRUMENT FLIGHT

- ___ ___ ___ Constant speed / Rate climbs
- ___ ___ ___ Climbs with turns
- ___ ___ ___ Level-off from climb procedure
- ___ ___ ___ Cruise
- ___ ___ ___ Scan instruction and practice (Primary instruments / Secondary instruments)
- ___ ___ ___ Straight and level
- ___ ___ ___ Turns—*headings, standard & 1/2 rate, timed*
- ___ ___ ___ Constant speed / Rate descents
- ___ ___ ___ Descents with turns
- ___ ___ ___ Level-off from descent procedure
- ___ ___ ___ Steep turns
- ___ ___ ___ Recover from unusual altitudes
- ___ ___ ___ Partial panel, all maneuvers above

**INSTRUMENT LESSON 2
BASIC INSTRUMENT FLIGHT PROCEDURES
(CONTINUED)**

LANDING

___ ___ ___ Stabilized approach
 ___ ___ ___ Touchdown—*drift, hover*
 ___ ___ ___ Taxi —*wind, hazards*
 ___ ___ ___ Shutdown
 ___ ___ ___ Postflight inspection

POSTFLIGHT

___ ___ ___ Debrief
 ___ ___ ___ Update TCO 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 ± 200 feet
2. Headings and rollouts $\pm 15^\circ$
3. Airspeed within ± 15 knots
4. Climbs and descents at specified rate ± 200 feet

	Flight	Inst	Total Inst	Instructor	Student	Date	Aircraft Type	Tail Number
This Lesson								
Total								

COMMENTS

Hours

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INSTRUMENT LESSON 3**INTERCEPTING AND TRACKING NAVIGATION FACILITIES****OBJECTIVE:** The student will practice navigation intercepting and tracking procedures.**TIME:** Approx 1.0 hour**EMPHASIS AREAS**

- ___ ___ ___ Positive aircraft control
- ___ ___ ___ Positive exchange of flight controls
- ___ ___ ___ LAHSO
- ___ ___ ___ CFIT
- ___ ___ ___ ADM and RM
- ___ ___ ___ Checklist usage

PREFLIGHT BRIEFING

- ___ ___ ___ Documents and required instrument checks
- ___ ___ ___ Wake turb, wind shear, collision avoidance
- ___ ___ ___ Runway incursion avoidance
- ___ ___ ___ Weather
- ___ ___ ___ Enroute charts, approach plates, sectionals

PREFLIGHT PREPARATION

- ___ ___ ___ IFR cockpit —*ARROW*
- ___ ___ ___ Tests—*VOR, Transponder, Alternate -Static, Altimeter, ELT, 121.5 check, RNAV/GPS*
- ___ ___ ___ IFR Preflight Inspection
- ___ ___ ___ IFR cockpit organization

STARTUP

- ___ ___ ___ Engine start
- ___ ___ ___ Comm radio setup—*freq, vol, transmitter*
- ___ ___ ___ Nav radio setup—*freq, ID, set course*
- ___ ___ ___ IFR clearance

TAXI AND RUNUP

- ___ ___ ___ Taxi—*wind, speed, hazards*
- ___ ___ ___ Gyros and compass check
- ___ ___ ___ Flight instrument check

TAKEOFF / CLIMB

- ___ ___ ___ Takeoff
- ___ ___ ___ Climb 500' then "on course"
- ___ ___ ___ Tower handoff / Center check-in
- ___ ___ ___ Center clearance

BASIC INSTRUMENT FLIGHT

- ___ ___ ___ Constant speed / Rate climbs
- ___ ___ ___ Climbs with turns
- ___ ___ ___ Level-off from climb procedure
- ___ ___ ___ Cruise
- ___ ___ ___ Straight and level
- ___ ___ ___ Turns—*headings, standard & 1/2 rate, timed*
- ___ ___ ___ Constant speed / Rate descents
- ___ ___ ___ Descents with turns
- ___ ___ ___ Partial panel

INTERCEPTING / TRACKING

- ___ ___ ___ Intercepting nav radials / courses
- ___ ___ ___ Tracking to / from nav stations
- ___ ___ ___ Partial panel, all maneuvers above

LANDING

- ___ ___ ___ Landing clearance
- ___ ___ ___ Stabilized approach
- ___ ___ ___ Taxi —*wind, hazards*
- ___ ___ ___ Shutdown

**INSTRUMENT LESSON 3
INTERCEPTING AND TRACKING NAVIGATION FACILITIES
(CONTINUED)**

POSTFLIGHT

___ ___ ___ Debrief

___ ___ ___ Update TCO 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 ± 200 feet
2. Headings and rollouts $\pm 15^\circ$
3. Airspeed within ± 15 knots
4. Climbs and descents at specified rate ± 200 feet

	Flight	Inst	Total Inst	Instructor	Student	Date	Aircraft Type	Tail Number
Previous								
This Lesson								
Total								

COMMENTS

Hours

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INSTRUMENT LESSON 4

BRIEFING—VOR, RNAV/GPS, DME AND INTERSECTION HOLDING PROCEDURES
OBJECTIVE: Instructor will tutor the student on the elements of instrument holding procedures.
TIME: As required

THE HOLDING CLEARANCE

- ___ ___ ___ Holding direction
- ___ ___ ___ Holding facility
- ___ ___ ___ Holding radial or bearing
- ___ ___ ___ DME holds
- ___ ___ ___ Direction of turns
- ___ ___ ___ Length of inbound leg
- ___ ___ ___ EFC Time
- ___ ___ ___ Protected / unprotected airspace
- ___ ___ ___ Reporting required

FLYING THE HOLD

- ___ ___ ___ Tracking to the fix
- ___ ___ ___ Entering the hold
- ___ ___ ___ Establishing wind cx inbound
- ___ ___ ___ Crossing the holding fix
- ___ ___ ___ Reporting to ATC when established
- ___ ___ ___ Flying the fix end turn, re: the wind
- ___ ___ ___ Beginning time abeam the fix
- ___ ___ ___ Establishing wind cx on the outbound
- ___ ___ ___ Timing outbound
- ___ ___ ___ Flying the outbound end turn
- ___ ___ ___ Monitoring the intercept
- ___ ___ ___ Intercepting the holding course
- ___ ___ ___ Beginning time on the intercept
- ___ ___ ___ Flying the inbound course
- ___ ___ ___ Timing inbound
- ___ ___ ___ Adjusting time & wind cx on the outbound leg

PLANNING THE HOLD—STANDARD AND NON-STANDARD

- ___ ___ ___ Drawing the hold
- ___ ___ ___ Drawing the wind direction and speed
- ___ ___ ___ Understanding the effects of the wind
- ___ ___ ___ Drawing the aircraft bearing to the fix
- ___ ___ ___ Direct entry
- ___ ___ ___ Parallel entry
- ___ ___ ___ Teardrop entry

POSTBRIEF

- ___ ___ ___ Update TCO

COMPLETION STANDARDS

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

1. Accurately describe a holding pattern
2. Identify the elements of holding clearance
3. Accurately describe the three standard and non-standard entry methods

Instructor

Student

Date

Hours

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INSTRUMENT LESSON 5

VOR, GPS, DME AND INTERSECTION HOLDING PROCEDURES

OBJECTIVE: The student will practice, with instructor guidance, instrument holding procedures.

TIME: Approx 3.0 hours

EMPHASIS AREAS

- ___ ___ ___ Positive aircraft control
- ___ ___ ___ Positive exchange of flight controls
- ___ ___ ___ LAHSO
- ___ ___ ___ CFIT
- ___ ___ ___ ADM and RM
- ___ ___ ___ Checklist usage

PREFLIGHT BRIEFING

- ___ ___ ___ Documents and required instrument checks
- ___ ___ ___ Wake turb, wind shear, collision avoidance
- ___ ___ ___ Runway incursion avoidance
- ___ ___ ___ Weather
- ___ ___ ___ FAR AIM, enroute charts, approach plates
- ___ ___ ___ Flight equipment—*kneeboard, pencils, etc.*

PREFLIGHT PREPARATION

- ___ ___ ___ IFR cockpit —*ARROW*
- ___ ___ ___ Tests—*VOR, Transponder, Alternate -Static, Altimeter, ELT, 121.5 check, RNAV/GPS (as required)*
- ___ ___ ___ IFR Preflight Inspection
- ___ ___ ___ IFR cockpit organization

STARTUP

- ___ ___ ___ Engine start
- ___ ___ ___ Comm radio setup—*freq, vol, transmitter*
- ___ ___ ___ Nav radio setup—*freq, ID, set course*
- ___ ___ ___ ATIS
- ___ ___ ___ IFR clearance

TAXI AND RUNUP

- ___ ___ ___ Taxi clearance
- ___ ___ ___ Taxi—*wind, speed, hazards*
- ___ ___ ___ Gyros and compass check
- ___ ___ ___ Flight Instrument Check

TAKEOFF / CLIMB

- ___ ___ ___ Takeoff
- ___ ___ ___ Climb 500' then "on course"
- ___ ___ ___ Climb
- ___ ___ ___ Tower handoff / Center Check-in
- ___ ___ ___ Center clearance

BASIC INSTRUMENT FLIGHT

- ___ ___ ___ Constant speed / Rate climbs with turns
- ___ ___ ___ Level-off procedure
- ___ ___ ___ Cruise checklist
- ___ ___ ___ Straight and level
- ___ ___ ___ Turns—*headings, standard & 1/2 rate, timed*
- ___ ___ ___ Constant speed / rate descents with turns
- ___ ___ ___ Partial panel, all maneuvers

INTERCEPTING / TRACKING

- ___ ___ ___ Intercepting radials / courses
- ___ ___ ___ Tracking to / from nav stations
- ___ ___ ___ Partial panel, all maneuvers

**INSTRUMENT LESSON 5
AATD, BATD, FTD or ACFT—HOLDING PROCEDURES
(CONTINUED)**

HOLDING PROCEDURES—STANDARD / NON-STANDARD

LANDING

- ___ ___ ___ Holding clearance
- ___ ___ ___ Flying the entry and estimating wind cx
- ___ ___ ___ Tracking to the holding fix and reporting to ATC
- ___ ___ ___ Flying the fix end turn
- ___ ___ ___ Flying to the abeam point / establishing the wind cx
- ___ ___ ___ Timing—flying the outbound leg
- ___ ___ ___ Flying the outbound end turn and intercepting
- ___ ___ ___ Timing—tracking the inbound course with wind cx
- ___ ___ ___ Reporting to ATC on leaving the hold

- ___ ___ ___ Stabilized approach
- ___ ___ ___ Landing—*centerline, hover*
- ___ ___ ___ Taxi —*wind, hazards*
- ___ ___ ___ Shutdown

POSTFLIGHT

- ___ ___ ___ Debrief
- ___ ___ ___ Update TCO and logbook

COMPLETION STANDARDS

The student will understand and be able to perform basic instrument flight procedures while maintaining the following:

1. Altitude ± 200 feet
2. Headings $\pm 15^\circ$
3. Airspeed within ± 10 knots
4. Climbs and descents at specified rate ± 200 feet

	Flight	Inst	Total Inst	Instructor	Student	Date	Aircraft Type	Tail Number
Previous								
This Lesson								
Total								

Hours		

INSTRUMENT LESSON 6

BRIEFING—NON-PRECISION / PRECISION APPROACH PROCEDURES

OBJECTIVE: The student will be tutored on non-precision approach procedures.

TIME: As required

TRANSITION FROM ENROUTE STRUCTURE

- ___ ___ ___ Obtaining weather—*ATIS, AWOS, ASOS*
- ___ ___ ___ Brief approach
- ___ ___ ___ Set frequencies and ID stations
- ___ ___ ___ Tracking to the IAF

INITIAL AND INTERMEDIATE APPROACH SEGMENTS

- ___ ___ ___ Timing / mileage outbound from the IAF
- ___ ___ ___ Turning outbound on the PT
- ___ ___ ___ Descending to altitude
- ___ ___ ___ Complete landing checklist
- ___ ___ ___ Timing the PT outbound
- ___ ___ ___ Turning PT inbound

FINAL APPROACH SEGMENT

- ___ ___ ___ Beginning time at the FAF (if required)
- ___ ___ ___ Beginning descent at the FAF
- ___ ___ ___ Descending to the MDA / DA
- ___ ___ ___ Time as the Missed Approach Point
- ___ ___ ___ Distance as the Missed Approach Point
- ___ ___ ___ Nav facility as the Missed Approach Point
- ___ ___ ___ Maintaining MDA until the Missed Approach Point
- ___ ___ ___ Transitioning to visual approach
- ___ ___ ___ Beginning the Missed Approach Procedure

MISSED APPROACH SEGMENT

- ___ ___ ___ Transition to missed approach
- ___ ___ ___ Call ATC re: "... going missed!"
- ___ ___ ___ ATC clearance

POSTBRIEF

- ___ ___ ___ Update TCO

COMPLETION STANDARDS

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

<u>Instructor</u>	<u>Student</u>	<u>Date</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____

Hours

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**INSTRUMENT LESSON 7
FLYING NON-PRECISION APPROACH PROCEDURES**

OBJECTIVE: Instructor will demonstrate and student will practice non-precision approach procedures.
TIME: Approx 6.0 hours

EMPHASIS AREAS

- ___ ___ ___ Positive aircraft control
- ___ ___ ___ Positive exchange of flight controls
- ___ ___ ___ LAHSO
- ___ ___ ___ CFIT
- ___ ___ ___ ADM and RM
- ___ ___ ___ Checklist usage

PREFLIGHT BRIEFING

- ___ ___ ___ Documents and required instrument checks
- ___ ___ ___ Wake turb, wind shear, collision avoidance
- ___ ___ ___ Runway incursion avoidance
- ___ ___ ___ Weather
- ___ ___ ___ Enroute charts, approach plates, sectionals
- ___ ___ ___ Flight equipment—*kneeboard, pencils, etc.*

PREFLIGHT PREPARATION

- ___ ___ ___ Weight and Balance
- ___ ___ ___ IFR cockpit —*ARROW*
- ___ ___ ___ Tests—*VOR, Transponder, Alternate-Static, Altimeter, ELT, 121.5 check, RNAV/GPS, ADF (as applicable)*
- ___ ___ ___ IFR Preflight Inspection
- ___ ___ ___ IFR cockpit organization

STARTUP

- ___ ___ ___ Engine start
- ___ ___ ___ Comm radio setup—*freq, vol, transmitter*
- ___ ___ ___ Nav radio setup—*freq, ID, set course*
- ___ ___ ___ ATIS
- ___ ___ ___ IFR clearance

TAXI

- ___ ___ ___ Taxi—*wind, speed, hazards*
- ___ ___ ___ Gyros and compass check
- ___ ___ ___ Flight instrument check

TAKEOFF / CLIMB

- ___ ___ ___ Takeoff—*normal*
- ___ ___ ___ Climb 500' then "on course"
- ___ ___ ___ Tower handoff / Center check-in
- ___ ___ ___ Center clearance

TRANSITION FROM ENROUTE STRUCTURE

- ___ ___ ___ Obtain ATIS
- ___ ___ ___ Brief the approach
- ___ ___ ___ Set frequencies
- ___ ___ ___ Identify stations
- ___ ___ ___ Set course
- ___ ___ ___ Intercept course
- ___ ___ ___ Track course
- ___ ___ ___ Descent to altitude
- ___ ___ ___ Configure acft for approach

INITIAL / INTERMEDIATE FIX TO FAF

- ___ ___ ___ Timing outbound from the IAF
- ___ ___ ___ Timing/flying procedure turn outbound
- ___ ___ ___ Remaining within protected airspace
- ___ ___ ___ Intercepting the inbound course to IF or FAF
- ___ ___ ___ Reviewing the Missed Approach Procedure
- ___ ___ ___ Confirm track / course
- ___ ___ ___ Begin descent, as required

**INSTRUMENT LESSON 7
FLYING NON-PRECISION APPROACH PROCEDURES
(CONTINUED)**

FAF TO MAP

___ ___ ___ Start time
 ___ ___ ___ Maintaining track / course
 ___ ___ ___ Begin descent to MDA
 ___ ___ ___ Inform ATC
 ___ ___ ___ Identify MAP
 ___ ___ ___ Transition to visual and land... or
 ___ ___ ___ Begin missed approach procedure... or
 ___ ___ ___ Circle to land

FLYING THE MISSED APPROACH PROCEDURE

___ ___ ___ Getting established on the Missed Approach
 ___ ___ ___ Calling ATC re: "... going missed!"
 ___ ___ ___ Missed clearance

POSTFLIGHT

___ ___ ___ 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 ± 200 feet
2. Headings $\pm 15^\circ$
3. Airspeed within ± 10 knots
4. Climbs and descents at specified rate ± 200 feet

	Flight	Inst	FTD	Total Inst					
This Lesson									
Total									

COMMENTS

Hours

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INSTRUMENT LESSON 8
FLYING PRECISION APPROACH PROCEDURES
OBJECTIVE: The student, under instructor guidance, will practice flying precision approach procedures.
TIME: Approx 3.0 hours
EMPHASIS AREAS

- ___ ___ ___ Positive aircraft control
- ___ ___ ___ Positive exchange of flight controls
- ___ ___ ___ LAHSO
- ___ ___ ___ CFIT
- ___ ___ ___ ADM and RM
- ___ ___ ___ Checklist usage

PREFLIGHT BRIEFING

- ___ ___ ___ Documents and required instrument checks
- ___ ___ ___ Wake turb, wind shear, collision avoidance
- ___ ___ ___ Runway incursion avoidance
- ___ ___ ___ Weather
- ___ ___ ___ Enroute charts, approach plates, sectionals
- ___ ___ ___ Flight equipment—*kneeboard, pencils, etc.*

PREFLIGHT PREPARATION

- ___ ___ ___ IFR cockpit —*ARROW*
- ___ ___ ___ Tests—*VOR, Transponder, Alternate-Static, Altimeter, ELT, 121.5 check, RNAV/GPS, ADF (as applicable)*
- ___ ___ ___ IFR Preflight Inspection
- ___ ___ ___ IFR cockpit organization

STARTUP

- ___ ___ ___ Engine start
- ___ ___ ___ Comm radio setup—*freq, vol, transmitter*
- ___ ___ ___ Nav radio setup—*freq, ID, set course*
- ___ ___ ___ ATIS
- ___ ___ ___ IFR clearance

TAXI

- ___ ___ ___ Taxi
- ___ ___ ___ Taxi—*wind, speed, hazards*
- ___ ___ ___ Gyros and compass check
- ___ ___ ___ Flight instrument check

TAKEOFF / CLIMB

- ___ ___ ___ Takeoff—*normal*
- ___ ___ ___ Climb 500' then "on course"
- ___ ___ ___ Tower handoff / Center check-in
- ___ ___ ___ Center clearance

FLYING TO THE IAF

- ___ ___ ___ Obtain ATIS
- ___ ___ ___ Brief the approach
- ___ ___ ___ Set frequencies
- ___ ___ ___ Identify stations
- ___ ___ ___ Set course
- ___ ___ ___ Intercept course
- ___ ___ ___ Track course
- ___ ___ ___ Descent to altitude

IAF TO INTERMEDIATE FIX

- ___ ___ ___ Timing outbound from the IAF
- ___ ___ ___ Timing/flying procedure turn outbound
- ___ ___ ___ Remaining within protected airspace
- ___ ___ ___ Intercepting the inbound course to IF
- ___ ___ ___ Reviewing the Missed Approach Procedure

IF TO FAF

- ___ ___ ___ Confirm track / course
- ___ ___ ___ Begin descent, as required
- ___ ___ ___ Intercepting / descending on glide slope

**INSTRUMENT LESSON 8
FLYING PRECISION APPROACH PROCEDURES
(CONTINUED)**

FAF TO MAP (the DA)

- ___ ___ ___ Start timing
- ___ ___ ___ Maintaining track / course
- ___ ___ ___ Descending on glide slope
- ___ ___ ___ Inform ATC
- ___ ___ ___ Identify DA
- ___ ___ ___ Transitioning to visual and land...
or
- ___ ___ ___ Begin missed approach procedure... or
- ___ ___ ___ Circling to land

FLYING THE MISSED APPROACH PROCEDURE

- ___ ___ ___ Getting established on the Missed Approach Procedure
- ___ ___ ___ Calling ATC re: "... going missed!"
- ___ ___ ___ Missed clearance

POSTFLIGHT

- ___ ___ ___ 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 ± 200 feet
2. Headings $\pm 15^\circ$
3. Airspeed within ± 10 knots
4. Climbs and descents at specified rate ± 200 feet

	Flight	Inst	Total Inst	Instructor	Student	Date	Aircraft Type	Tail Number
Previous								
This Lesson								
Total								

COMMENTS

Hours

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INSTRUMENT LESSON 9

FLYING DME ARCS

OBJECTIVE: The student, under instructor guidance, will practice flying DME ARCS.

TIME: Approx 1.0 hour

EMPHASIS AREAS

- ___ ___ ___ Positive aircraft control
- ___ ___ ___ Positive exchange of flight controls
- ___ ___ ___ LAHSO
- ___ ___ ___ CFIT
- ___ ___ ___ ADM and RM
- ___ ___ ___ Checklist usage

PREFLIGHT BRIEFING

- ___ ___ ___ Documents and required instrument checks
- ___ ___ ___ Wake turb, wind shear, collision avoidance
- ___ ___ ___ Runway incursion avoidance
- ___ ___ ___ Weather
- ___ ___ ___ Enroute charts, approach plates, sectionals
- ___ ___ ___ Flight equipment—*kneeboard, pencils, etc.*

PREFLIGHT PREPARATION

- ___ ___ ___ IFR cockpit —*ARROW*
- ___ ___ ___ Tests—*VOR, Transponder, Alternate-Static, Altimeter, RNAV/GPS*
- ___ ___ ___ IFR Preflight Inspection
- ___ ___ ___ IFR cockpit organization

STARTUP

- ___ ___ ___ Engine start
- ___ ___ ___ Comm radio setup—*freq, vol, transmitter*
- ___ ___ ___ Nav radio setup—*freq, ID, set course*
- ___ ___ ___ ATIS
- ___ ___ ___ IFR clearance

TAXI

- ___ ___ ___ Taxi clearance
- ___ ___ ___ Taxi—*wind, speed, hazards*
- ___ ___ ___ Gyros and compass check
- ___ ___ ___ Flight instrument check

FLYING TO THE ARC

- ___ ___ ___ Brief the approach
- ___ ___ ___ Set freqs for the ARC and approach
- ___ ___ ___ Identify stations
- ___ ___ ___ Set courses for the ARC and approach
- ___ ___ ___ Tracking radial to the ARC
- ___ ___ ___ Descending to altitude
- ___ ___ ___ Intercepting the ARC

FLYING THE ARC

- ___ ___ ___ Resetting courses to first crossing radial
- ___ ___ ___ Monitoring distance
- ___ ___ ___ Intercepting crossing radials
- ___ ___ ___ Adjusting course to maintain the ARC

INTERCEPTING THE FINAL APPROACH COURSE

- ___ ___ ___ Anticipating the LR or final approach course
- ___ ___ ___ Intercepting the final approach course
- ___ ___ ___ Tracking the course inbound
- ___ ___ ___ Review of Missed Approach Procedure
- ___ ___ ___ Intercepting the Glide Slope (if appropriate)

**INSTRUMENT LESSON 9
FLYING DME ARCS
(CONTINUED)**

FLYING THE FINAL APPROACH SEGMENT

- ___ ___ ___ Start timing
- ___ ___ ___ Maintaining track / course
- ___ ___ ___ Descending to DA / MDA
- ___ ___ ___ Informing ATC
- ___ ___ ___ Identifying DA / MDA
- ___ ___ ___ Transitioning to visual landing...or
- ___ ___ ___ Begin missed approach procedure... or
- ___ ___ ___ Circle to land

FLYING THE MISSED APPROACH PROCEDURE

- ___ ___ ___ Getting established on the Missed Approach Procedure
- ___ ___ ___ Calling ATC
- ___ ___ ___ Missed approach clearance—*copy, confirm, comply*

POSTFLIGHT

- ___ ___ ___ 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 ± 200 feet
2. Headings $\pm 15^\circ$
3. Airspeed within ± 10 knots
4. Climbs and descents at specified rate ± 200 feet

	Flight	Inst	Total Inst	Instructor	Student	Date	Aircraft Type	Tail Number
Previous								
This Lesson								
Total								

Hours

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**INSTRUMENT LESSON 10
BRIEFING—FOR STAGE ONE CHECK**

OBJECTIVE: The student will demonstrate an understanding of the IFR procedures and operations listed.
TIME: As required.

PREFLIGHT PREPARATIONS

- ___ ___ ___ Risk factors—PAVE
- ___ ___ ___ Recent flight experience—IFR
- ___ ___ ___ Required documents
- ___ ___ ___ Required instruments/inspections

AIRCRAFT SYSTEMS

Icing:

- ___ ___ ___ Airframe, pitot-static, intake
- ___ ___ ___ Effects of icing

Aspen Avionics Display:

- ___ ___ ___ Tape failure-Vspeed, altitude
- ___ ___ ___ GPS and WAAS Failure
- ___ ___ ___ Electrical power supply malfunctions

GPS Terms:

- ___ ___ ___ RAIM
- ___ ___ ___ WAAS
- ___ ___ ___ LPV/DA
- ___ ___ ___ LNAV/VNAV/DA
- ___ ___ ___ LNAV/MDA

WEATHER

- ___ ___ ___ Reports/Forecasts—TAF/FA/FD
- ___ ___ ___ Sigmet/Airmets/AV Charts
- ___ ___ ___ Wx radar
- ___ ___ ___ Notams

ATC CLEARANCES AND PROCEDURES

- ___ ___ ___ Flight plan filing/Closing
- ___ ___ ___ Standard clearance items
- ___ ___ ___ Abbreviated/Full Route/Amended
- ___ ___ ___ Holding clearances/Procedures
- ___ ___ ___ Approach clearances/Visual/Contact
- ___ ___ ___ Required reports/Lost communications

CHARTS AND PUBLICATIONS

- ___ ___ ___ Enroute charts/Symbology
- ___ ___ ___ A/FD
- ___ ___ ___ Approach charts/Symbology:
- ___ ___ ___ ILS/LOC/BC
- ___ ___ ___ VOR/DME/w/arcs
- ___ ___ ___ RNAV (GPS)
- ___ ___ ___ SDF/LDA/ASR
- ___ ___ ___ Inoperative components table
- ___ ___ ___ Departure procedures:
- ___ ___ ___ ODP's/SID's/Takeoff & Alternate Mins.
- ___ ___ ___ STARS

REGULATIONS/PROCEDURES

- ___ ___ ___ Instrument flight Rules Part 91
- ___ ___ ___ UD inst. training limitations

COMPLETION STANDARDS

The student will receive a grade of 2 or better and demonstrate an understanding of all procedures by thoroughly explaining their execution.

Instructor

Student

Date

_____	_____	_____
_____	_____	_____
_____	_____	_____

Hours

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**INSTRUMENT LESSON 11
REVIEW FOR THE STAGE ONE CHECK**

OBJECTIVE: Student will demonstrate proficiency in all procedures previously introduced.

TIME: Approx 3.0 hours

EMPHASIS AREAS

- ___ ___ ___ Positive aircraft control
- ___ ___ ___ Positive exchange of flight controls
- ___ ___ ___ LAHSO
- ___ ___ ___ CFIT
- ___ ___ ___ ADM and RM
- ___ ___ ___ Checklist usage

PREFLIGHT BRIEFING

- ___ ___ ___ Documents and required instrument checks
- ___ ___ ___ Wake turb, wind shear, collision avoidance
- ___ ___ ___ Runway incursion avoidance
- ___ ___ ___ Weather
- ___ ___ ___ FAR AIM, enroute charts, approach plates, sectionals, WACs

PREFLIGHT PREPARATION

- ___ ___ ___ Weight and Balance
- ___ ___ ___ IFR cockpit —ARROW
- ___ ___ ___ Tests—VOR, Transponder, Alternate-Static, Altimeter, RNAV/GPS (as required)
- ___ ___ ___ IFR Preflight Inspection
- ___ ___ ___ IFR cockpit organization

STARTUP

- ___ ___ ___ Engine start
- ___ ___ ___ Comm radio setup—freq, vol, transmitter
- ___ ___ ___ Nav radio setup—freq, ID, set course
- ___ ___ ___ ATIS
- ___ ___ ___ IFR clearance

TAXI

- ___ ___ ___ Taxi—wind, speed, hazards
- ___ ___ ___ Gyros and compass check
- ___ ___ ___ Flight Instrument Check

TAKEOFF / CLIMB

- ___ ___ ___ Takeoff clearance
- ___ ___ ___ Takeoff—normal
- ___ ___ ___ Climb 500' then "on course"
- ___ ___ ___ Climb
- ___ ___ ___ Tower handoff / Center Check-in

BASIC INSTRUMENT FLIGHT

- ___ ___ ___ Flight at various airspeeds
- ___ ___ ___ Constant rate / speed climbs and descents
- ___ ___ ___ Standard and 1/2 rate turns
- ___ ___ ___ Steep turns
- ___ ___ ___ Recovery from unusual altitudes
- ___ ___ ___ Partial panel—all exercises above

INTERCEPTING / TRACKING (VOR and RNAV/GPS)

- ___ ___ ___ Intercepting nav radials / courses
- ___ ___ ___ Tracking to / from nav stations
- ___ ___ ___ Partial panel, all maneuvers above

HOLDING—STANDARD / NON-STANDARD

- ___ ___ ___ VOR—holding at the nav aid
- ___ ___ ___ VOR—holding at intersections
- ___ ___ ___ DME holds
- ___ ___ ___ GPS

**INSTRUMENT LESSON 11
REVIEW FOR THE STAGE ONE CHECK
(CONTINUED)**

APPROACHES

___ ___ ___ DME ARC
 ___ ___ ___ ILS
 ___ ___ ___ VOR
 ___ ___ ___ Localizer
 ___ ___ ___ Localizer back course
 ___ ___ ___ GPS

LANDINGS

___ ___ ___ Identifying DA / MDA
 ___ ___ ___ Transitioning to visual landing...
 or
 ___ ___ ___ Flying a missed approach
 procedure
 ___ ___ ___ Circling to land

POSTFLIGHT

___ ___ ___ Debrief
 ___ ___ ___ Update TCO and logbook

COMPLETION STANDARDS

The student will understand and be able to perform basic instrument flight procedures while maintaining the following:

1. Altitude ± 150 feet
2. Headings $\pm 15^\circ$
3. Airspeed within ± 10 knots
4. Climbs and descents at specified rate ± 200 feet

	Flight	Inst	Total Inst	Instructor	Student	Date	Aircraft Type	Tail Number
Previous								
This Lesson								
Total								

COMMENTS

Hours

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**INSTRUMENT LESSON 12
STAGE ONE CHECK**

OBJECTIVE: The student shall demonstrate understanding of and proficiency in the procedures listed below.
TIME: As required

EMPHASIS AREAS

- ___ ___ ___ Positive aircraft control
- ___ ___ ___ Positive exchange of flight controls
- ___ ___ ___ LAHSO
- ___ ___ ___ CFIT
- ___ ___ ___ ADM and RM
- ___ ___ ___ Checklist usage

PREFLIGHT BRIEFING

- ___ ___ ___ Documents and required instrument checks
- ___ ___ ___ Wake turb, wind shear, collision avoidance
- ___ ___ ___ Runway incursion avoidance
- ___ ___ ___ Weather
- ___ ___ ___ FAR AIM, enroute charts, approach plates

PREFLIGHT PREPARATION

- ___ ___ ___ Weight and Balance
- ___ ___ ___ IFR cockpit —*ARROW*
- ___ ___ ___ Tests—*VOR, Transponder, Altimeter/Static System, GPS database expiration*
- ___ ___ ___ IFR Preflight Inspection
- ___ ___ ___ IFR cockpit organization

STARTUP

- ___ ___ ___ Engine start
- ___ ___ ___ Comm radio setup—*freq, vol, transmitter*
- ___ ___ ___ Nav radio setup—*freq, ID, set course*
- ___ ___ ___ ATIS
- ___ ___ ___ IFR clearance

TAXI AND RUNUP

- ___ ___ ___ Taxi—*wind, speed, hazards*
- ___ ___ ___ Gyros and compass check
- ___ ___ ___ Flight instrument check

TAKEOFF / CLIMB

- ___ ___ ___ Takeoff—*normal*
- ___ ___ ___ Climb 500' then "on course"
- ___ ___ ___ Climb

BASIC INSTRUMENT FLIGHT

At least 2 tasks below—partial panel

- ___ ___ ___ Flight at various airspeeds
- ___ ___ ___ Constant rate / speed climbs and descents
- ___ ___ ___ Standard and 1/2 rate turns
- ___ ___ ___ Steep turns (full panel)
- ___ ___ ___ Recovery from unusual altitudes

HOLDING—STANDARD / NON-STANDARD

Minimum of 2 holds (at least 1 partial panel)

- ___ ___ ___ VOR—*holding at the nav aid (optional)*
- ___ ___ ___ VOR—*holding at an intersection (optional)*
- ___ ___ ___ GPS—(optional)
- ___ ___ ___ DME—hold (optional)

APPROACHES

Minimum of 3 approaches (at least 1 partial panel)

- ___ ___ ___ DME ARC (optional)
- ___ ___ ___ GPS
- ___ ___ ___ ILS or LPV
- ___ ___ ___ VOR (optional)
- ___ ___ ___ Localizer (optional)
- ___ ___ ___ Localizer back course (optional)

**INSTRUMENT LESSON 12
STAGE ONE CHECK
(CONTINUED)**

LANDINGS

____ ____ ____ Identifying DA / MDA
 ____ ____ ____ One missed approach procedure
 ____ ____ ____ From a straight in approach
 ____ ____ ____ Circling approach

POSTFLIGHT

____ ____ ____ Debrief
 ____ ____ ____ Update TCO and logbook

COMPLETION STANDARDS

The student will understand and be able to perform basic instrument flight procedures while maintaining the following:

1. Altitude ± 150 feet
2. Headings $\pm 15^\circ$
3. Airspeed within ± 10 knots
4. Climbs and descents at specified rate ± 200 feet

	Flight	Inst	Total Inst	Instructor	Student	Date	Aircraft Type	Tail Number
Previous								
This Lesson								
Total								

RECOMMENDATION

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 Instruc- _____ **Stu-** _____ **Date** _____
tor _____ **dent** _____

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

Check Instruc- _____ **Stu-** _____ **Date** _____
tor _____ **dent** _____

INSTRUMENT RATING COURSE

STAGE TWO

Cross Country Flight Training
Lessons 13-16

Stage two
The student will cross-country flying, and will review procedures in for the Rating Check

15.0 hours (approx) of dual instrument flight training in a Helicopter to include:
10.0 hours (approx) of instrument cross-country training to include:

1. At least one instrument cross-country flight of at least 100 nautical miles
2. Along airways or using ATC-directed routing
3. Doing three different kinds of instrument approaches
4. Comprehensive instrument procedures review prior to the final rating check
5. 3 hours flight training in preparation for the practical test must be within 2 calendar months of the date of the test.

Objectives
be instructed in instrument

all instrument preparation Instrument

Stage Two

Completion

Standards

This stage will be complete when the student meets all lesson standards and performs all maneuvers to Practical Test Standards.

Hours

--	--	--

INSTRUMENT LESSON 13

BRIEFING—IFR CROSS-COUNTRY PLANNING AND FLYING

OBJECTIVE: The instructor will guide the student in planning a simulated IFR cross-country.
TIME: As required

PREFLIGHT PLANNING

- ___ ___ ___ Pilot—human factors
- ___ ___ ___ CFR Parts 61 / 91
- ___ ___ ___ Enroute and approach charts
- ___ ___ ___ Take off and landing minima
- ___ ___ ___ Navigation log
- ___ ___ ___ FSS

WEATHER REPORTS

- ___ ___ ___ METARs
- ___ ___ ___ PIREPs
- ___ ___ ___ SDs
- ___ ___ ___ Satellite weather pictures

WEATHER FORECASTS

- ___ ___ ___ TAFs
- ___ ___ ___ FAs (area forecasts)
- ___ ___ ___ WAs, Ws, WSTs
- ___ ___ ___ FDs (winds and temps aloft)
- ___ ___ ___ CWAs
- ___ ___ ___ ACs (convective outlooks)
- ___ ___ ___ AWW (severe weather forecast alert)
- ___ ___ ___ WW (severe weather watch bulletin)
- ___ ___ ___ ATIS

NOTAMS

- ___ ___ ___ D and FDCs

WEATHER CHARTS

- ___ ___ ___ Surface Analysis Charts
- ___ ___ ___ Weather Depiction Charts
- ___ ___ ___ Radar Summary Charts
- ___ ___ ___ Low-Level Prog Charts
- ___ ___ ___ Winds & Temps Aloft Charts
- ___ ___ ___ Composite Moisture Stability Charts
- ___ ___ ___ Severe Weather Outlook Charts
- ___ ___ ___ Constant Pressure Analysis Charts

FLIGHT PLANNING

- ___ ___ ___ Review aircraft emergency procedures
- ___ ___ ___ Completing flight plan
- ___ ___ ___ Filing flight plan (controlled and uncontrolled airports)

AIRCRAFT PREFLIGHT

- ___ ___ ___ Normal preflight items
- ___ ___ ___ IFR preflight items

COMMUNICATIONS

- ___ ___ ___ IFR clearance
- ___ ___ ___ Taxi clearance
- ___ ___ ___ IFR Clearance (controlled and uncontrolled airports)

TAXI

- ___ ___ ___ Flight instrument check
- ___ ___ ___ Runup

**INSTRUMENT LESSON 13
BRIEFING—IFR CROSS-COUNTRY PLANNING AND FLYING
(CONTINUED)**

TAKEOFF

___ ___ ___ Takeoff
 ___ ___ ___ Climb out and transition to IFR
 ___ ___ ___ "Runway heading" or "assigned"

DEPARTURE

___ ___ ___ Tower handoff to departure
 ___ ___ ___ ATC clearance

IFR EMERGENCY OPERATIONS

___ ___ ___ Takeoff, enroute, approach
 ___ ___ ___ Unforecasted adverse wx
 ___ ___ ___ Inadvertent icing encounter
 ___ ___ ___ Communications failure
 ___ ___ ___ Electrical failure
 ___ ___ ___ Pitot / static system failure
 ___ ___ ___ Loss of situational awareness
 ___ ___ ___ Unusual attitude recovery procedures

ENROUTE

___ ___ ___ Maintaining course and altitude
 ___ ___ ___ Communications procedures
 ___ ___ ___ Use of enroute charts to monitor flight
 ___ ___ ___ Completing flight log
 ___ ___ ___ Obtaining ATIS before ATC handoff
 ___ ___ ___ Handoff to approach control

APPROACH

___ ___ ___ ATC clearance
 ___ ___ ___ Briefing the approach
 ___ ___ ___ Setting up for the approach
 ___ ___ ___ Flying the approach
 ___ ___ ___ Transition to visual and landing
 ___ ___ ___ Canceling the flight plan

POSTBRIEF

___ ___ ___ Update TCO and logbook

COMPLETION STANDARDS

The lesson will be complete when the student can perform the following:

1. Obtain and interpret all types of weather reports
2. Use the weather reports and aircraft POH to complete a flight plan
3. Explain the various takeoff and in flight IFR procedures
4. Explain the various IFR emergency procedures
5. Interpret and use enroute charts and approach plates
6. Perform the required calculations to complete a flight log

Instructor

Student

Date

Hours

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INSTRUMENT LESSON 14
IFR CROSS-COUNTRY FLIGHT PROCEDURES

OBJECTIVE: Instructor guided, student flight experiences in IFR cross-country flight. In a helicopter under IFR, **one flight must be at least 100 nm long along airways or ATC-directed routing with one leg of at least 50 nm straight line distance, and include 3 different instrument approaches with the use of navigation systems with an instrument approach at each airport.** **TIME:** Approx 10.0 hours

EMPHASIS AREAS

- ___ ___ ___ Positive aircraft control
- ___ ___ ___ Positive exchange of flight controls
- ___ ___ ___ LAHSO
- ___ ___ ___ CFIT
- ___ ___ ___ ADM and RM
- ___ ___ ___ Checklist usage

PREFLIGHT BRIEFING

- ___ ___ ___ Documents and required instrument checks
- ___ ___ ___ Wake turb, wind shear, collision avoidance
- ___ ___ ___ Runway incursion avoidance
- ___ ___ ___ Weather briefing (reports, forecasts, charts)
- ___ ___ ___ FAR AIM, enroute charts, approach plates, sectionals
- ___ ___ ___ Flight equipment—*kneeboard, pencils, etc.*

PREFLIGHT PREPARATION

- ___ ___ ___ Weight and Balance
- ___ ___ ___ Completing / filing flight plan
- ___ ___ ___ IFR cockpit —*ARROW*
- ___ ___ ___ Tests—*VOR, Transponder, Altimeter/Static, GPS database expiration*
- ___ ___ ___ IFR Preflight Inspection
- ___ ___ ___ IFR cockpit organization

STARTUP

- ___ ___ ___ Engine start
- ___ ___ ___ Comm radio setup—*freq, vol, transmitter*
- ___ ___ ___ Nav radio setup—*freq, ID, set course*
- ___ ___ ___ ATIS
- ___ ___ ___ IFR clearance

TAXI

- ___ ___ ___ Taxi—*wind, speed, hazards*
- ___ ___ ___ Gyros and compass check
- ___ ___ ___ Flight instrument check

TAKEOFF / CLIMB

- ___ ___ ___ Takeoff
- ___ ___ ___ Climb 500' then "on course"
- ___ ___ ___ Climb
- ___ ___ ___ Tower handoff / Center check-in
- ___ ___ ___ Center clearance

IFR EMERGENCY OPERATIONS

- ___ ___ ___ Takeoff, enroute, approach
- ___ ___ ___ Unforecasted adverse wx
- ___ ___ ___ Inadvertent icing encounter
- ___ ___ ___ Communications failure
- ___ ___ ___ Electrical failure
- ___ ___ ___ Pitot / static system failure
- ___ ___ ___ Loss of situational awareness
- ___ ___ ___ Unusual attitude recovery procedures

Hours		

**INSTRUMENT LESSON 14
IFR CROSS-COUNTRY FLIGHT PROCEDURES
(CONTINUED)**

EMPHASIS AREAS

- ___ ___ ___ Positive aircraft control
- ___ ___ ___ Positive exchange of flight controls
- ___ ___ ___ LAHSO
- ___ ___ ___ CFIT
- ___ ___ ___ ADM and RM
- ___ ___ ___ Checklist usage

ENROUTE

- ___ ___ ___ Intercepting and tracking courses
- ___ ___ ___ Level-off from climb procedure
- ___ ___ ___ Maintaining course and altitude
- ___ ___ ___ Use of VORs/Victor Airways
- ___ ___ ___ Use of GPS
- ___ ___ ___ Enroute communications
- ___ ___ ___ Use of enroute charts to identify position
- ___ ___ ___ Completing flight logs
- ___ ___ ___ Identifying intersections
- ___ ___ ___ Holding procedures
- ___ ___ ___ Obtaining ATIS prior to approach control
- ___ ___ ___ Briefing the approach
- ___ ___ ___ Setting up approach—*freq, ID, set course*

INBOUND

- ___ ___ ___ Hand off to the approach controller
- ___ ___ ___ Navigation to the IAP or vectors to final
- ___ ___ ___ Approach—*initial, intermediate seg*

FINAL

- ___ ___ ___ Hand off to the tower or CTAF
- ___ ___ ___ Approach—*final seg within tolerances*
- ___ ___ ___ Preparations for missed approach

INSTRUMENT APPROACH PROCEDURES

Non-precision approaches full and partial panel

- ___ ___ ___ ILS
- ___ ___ ___ LOC
- ___ ___ ___ LOC/BC (optional)
- ___ ___ ___ VOR
- ___ ___ ___ GPS
- ___ ___ ___ Radar - ASR or PAR (optional)
- ___ ___ ___ Missed approach
- ___ ___ ___ Circling approach
- ___ ___ ___ Landing from straight-in / circling approach

LANDING

- ___ ___ ___ Transitioning to visual
- ___ ___ ___ Completion of landing
- ___ ___ ___ Canceling flight plan (*if applicable*)

MISSED APPROACH

- ___ ___ ___ Begins at the MAP
- ___ ___ ___ Transitions to missed approach configuration
- ___ ___ ___ Communicates with ATC appropriately
- ___ ___ ___ ATC clearance
- ___ ___ ___ Proceeds per ATC instructions

POSTFLIGHT

- ___ ___ ___ Debrief
- ___ ___ ___ Update TCO and logbook

**INSTRUMENT LESSON 14
IFR CROSS-COUNTRY FLIGHT PROCEDURES
(CONTINUED)**

COMPLETION STANDARDS

The student will perform instrument cross-country planning and flying procedures while maintaining the following:

1. Altitude ± 150 feet
2. Headings $\pm 15^\circ$
3. Airspeed within ± 10 knots
4. Climbs and descents at specified rate ± 150 feet

Cross-Country Routes—List approaches at each airport

Dates

	Flight	Inst	Total Inst	Instructor	Student	Date	Aircraft Type	Tail Number
Previous								
This Lesson								
Total								

COMMENTS

Hours

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INSTRUMENT LESSON 15**BRIEFING—PRIOR TO THE RATING CHECK****OBJECTIVE:** Student will demonstrate understanding of all procedures required for the instrument rating.**TIME:** As required**CERTIFICATES—STUDENT**

- ___ ___ ___ Logbook and TCO correct
- ___ ___ ___ Verification of Private Certificate
- ___ ___ ___ Verification of Medical Certificate

PILOT QUALIFICATIONS

- ___ ___ ___ Recent flight experience
- ___ ___ ___ Flight review
- ___ ___ ___ Safety pilot requirement
- ___ ___ ___ Logbook records/Entries
- ___ ___ ___ IPC requirements
- ___ ___ ___ IMSAFE
- ___ ___ ___ Medical requirements
- ___ ___ ___ Risk elements

WEATHER INFORMATION**Adverse Conditions:**

- ___ ___ ___ TFRs
- ___ ___ ___ Closed/Unsafe NOTAMs
- ___ ___ ___ WSTWSWA/UUA/CWA

Current Weather:

- ___ ___ ___ METARs/UAs
- ___ ___ ___ Wx Depiction/Surf. Analysis Chart
- ___ ___ ___ Radar & Radar Summary Chart

Forecasts:

- ___ ___ ___ FA/TAF/FD
- ___ ___ ___ Surface/SIGWX prog. Charts
- ___ ___ ___ Convective outlook
- ___ ___ ___ Freezing level/Icing prob. & sev.

General:

- ___ ___ ___ Enroute weather
- ___ ___ ___ NOTAMs (D and FDC)
- ___ ___ ___ Meteorology (i.e. Wx Theory)
- ___ ___ ___ Risk elements

CROSS-COUNTRY FLIGHT PLANNING

- ___ ___ ___ IFR fuel requirements
- ___ ___ ___ Alternate airport requirements
- ___ ___ ___ Low altitude chart
- ___ ___ ___ IFR preferred routing
- ___ ___ ___ Flight plans (filing/closing)
- ___ ___ ___ Oxygen requirements
- ___ ___ ___ IFR altitudes
- ___ ___ ___ Airspace, cloud clearance, & vis.
- ___ ___ ___ Risk elements

AIRCRAFT SYSTEMS RELATED TO IFR OPS.

- ___ ___ ___ Anti- & De-Icing systems
- ___ ___ ___ Fuselage
- ___ ___ ___ Rotor
- ___ ___ ___ Carburetor and intake
- ___ ___ ___ Pitot-static
- ___ ___ ___ Risk elements

AIRCRAFT FLIGHT INSTRUMENTS AND NAV EQUIP.

- ___ ___ ___ Pitot-static and ADC
- ___ ___ ___ AHRS & magnetometer
- ___ ___ ___ Vacuum & gyro system
- ___ ___ ___ Magnetic compass
- ___ ___ ___ NAVAIDs
- ___ ___ ___ VOR
- ___ ___ ___ ILS
- ___ ___ ___ GPS
- ___ ___ ___ WAAS and RAIM
- ___ ___ ___ Failure modes and errors
- ___ ___ ___ Risk elements

**INSTRUMENT LESSON 15
BRIEFING—PRIOR TO THE RATING CHECK
(CONTINUED)**

INSTRUMENT COCKPIT CHECK

- ___ ___ ___ Documents
- ___ ___ ___ Inspections
- ___ ___ ___ Required instruments/equipment
- ___ ___ ___ Inoperative equipment
- ___ ___ ___ Aviation databases
- ___ ___ ___ Risk elements

COMPLIANCE WITH ATC CLEARANCES

- ___ ___ ___ Responsibilities/Requirements
- ___ ___ ___ PIC authority
- ___ ___ ___ Methods to obtain clearances
- ___ ___ ___ Terrain clearance requirements
- ___ ___ ___ Lost communications
- ___ ___ ___ “Expect” in clearances
- ___ ___ ___ Departure, enroute, and arrival
- ___ ___ ___ Position reporting
- ___ ___ ___ Required IFR reports/VFR-on-top clearance
- ___ ___ ___ Risk elements

HOLDING

- ___ ___ ___ Purpose
- ___ ___ ___ Reports
- ___ ___ ___ Entries
- ___ ___ ___ EFC time
- ___ ___ ___ Minimum vs. emergency fuel
- ___ ___ ___ Wind corrections
- ___ ___ ___ Risk elements

FLIGHT BY REFERENCE TO INSTRUMENTS

- ___ ___ ___ Pitch, bank, & power instruments
- ___ ___ ___ SD and optical illusions
- ___ ___ ___ Normal/Abnormal instrument indications and operations
- ___ ___ ___ Unusual attitudes
- ___ ___ ___ Risk elements

INTERCEPTING AND TRACKING NAV SYSTEMS

- ___ ___ ___ Procedures
- ___ ___ ___ Bearing pointer system (RMI)
- ___ ___ ___ Nav system failures
- ___ ___ ___ DME Arcs:
- ___ ___ ___ “Turn 10, Twist 10”
- ___ ___ ___ Bearing pointer
- ___ ___ ___ Risk elements (all the above)

DEPARTURE, EN ROUTE, AND ARRIVAL OPS.

- ___ ___ ___ SIDs and ODPs
- ___ ___ ___ STARs
- ___ ___ ___ Terms (e.g. “Climb/Descend via”)
- ___ ___ ___ Airport lighting, signs, & markings
- ___ ___ ___ Inoperative components table
- ___ ___ ___ Climb/Descent table
- ___ ___ ___ Cold temperature table
- ___ ___ ___ Standard/Expanded circling

**INSTRUMENT LESSON 15
BRIEFING—PRIOR TO THE RATING CHECK
(CONTINUED)**

INSTRUMENT PROCEDURE CHARTS

- ___ ___ ___ ILS/PAR
- ___ ___ ___ GPS (LPV, LNAV/VNAV, LNAV, LP, LNAV+V, LP+V)
- ___ ___ ___ VOR, LOC, BC, LDA, SDF, ASR
- ___ ___ ___ IAF, IF, FAF, MAP, MAWP, MSA
- ___ ___ ___ MDA vs. DA
- ___ ___ ___ Risk elements

MISSED APPROACH

- ___ ___ ___ Procedures and limitations
- ___ ___ ___ Identifying MAP
- ___ ___ ___ MAP
- ___ ___ ___ Risk elements

CIRCLING APPROACH

- ___ ___ ___ Procedures and limitations
- ___ ___ ___ Approach category and airspeed
- ___ ___ ___ Expanded circling radii
- ___ ___ ___ Missed approach procedure
- ___ ___ ___ Risk elements

LANDING FROM AN INSTRUMENT APPROACH

- ___ ___ ___ Procedures and limitations
- ___ ___ ___ Stabilized approach
- ___ ___ ___ Continuing from DA/MDA
- ___ ___ ___ Approach lighting systems
- ___ ___ ___ LAHSO
- ___ ___ ___ Risk elements

POSTFLIGHT

- ___ ___ ___ Aircraft securing
- ___ ___ ___ Documenting malfunctions
- ___ ___ ___ Accident/Incident reporting
- ___ ___ ___ Risk elements

The student will demonstrate an understanding of all IFR procedures by thoroughly explaining their execution. The student must achieve a 3 rating on this lesson before proceeding to the Rating Check.

Instructor

Student

Date

INSTRUMENT LESSON 16

FLIGHT REVIEW FOR END OF COURSE EVALUATION

OBJECTIVE: To review all IFR procedures and maneuvers in preparation for the end of course evaluation flight.

TIME: Approx 5.0 hours

Hours		

PREFLIGHT PREPARATION

- ___ ___ ___ Weather information
- ___ ___ ___ Unforecasted adverse weather
- ___ ___ ___ Cross-Country flight planning
- ___ ___ ___ Inadvertent icing encounter
- ___ ___ ___ National Airspace System
- ___ ___ ___ Performance and limitations
- ___ ___ ___ Operation of systems
- ___ ___ ___ Minimum equipment list
- ___ ___ ___ Aeromedical factors
- ___ ___ ___ IFR emergencies

PREFLIGHT PROCEDURES

- ___ ___ ___ Aircraft systems related to IFR ops (airframe, intake, fuel, pitot-static)
- ___ ___ ___ Flight instruments
- ___ ___ ___ Navigation equipment
- ___ ___ ___ Cockpit, instrument & radio checks
- ___ ___ ___ Risk elements

ATC CLEARANCES AND PROCEDURES

- ___ ___ ___ ATC clearances
- ___ ___ ___ Compliance with all clearances
- ___ ___ ___ Holding procedures
- ___ ___ ___ Risk elements

FLIGHT BY REFERENCE TO INSTRUMENTS

- ___ ___ ___ Straight and level-partial & full panel
- ___ ___ ___ Change of airspeed-partial & full panel
- ___ ___ ___ Constant airspeed climbs and descents-partial & full panel
- ___ ___ ___ Constant rate climbs and descents-partial & full panel

FLIGHT BY REFERENCE TO INSTRUMENTS cont.

- ___ ___ ___ Timed turns to magnetic compass headings-partial & full panel
- ___ ___ ___ Unusual attitudes-partial & full panel
- ___ ___ ___ Risk elements

INTERCEPTING AND TRACKING, DME ARCS

- ___ ___ ___ Intercepting radials
- ___ ___ ___ Tracking radials / courses
- ___ ___ ___ DME Arc
- ___ ___ ___ Receiver or facility failure
- ___ ___ ___ Risk elements

HOLDING—SANDARD / NON-STANDARD

- ___ ___ ___ VOR—holding at the nav aid
- ___ ___ ___ VOR—holding at an intersection
- ___ ___ ___ GPS
- ___ ___ ___ DME—hold
- ___ ___ ___ Risk elements

INSTRUMENT APPROACH PROCEDURES

Non-precision approaches full and partial panel

- ___ ___ ___ ILS
- ___ ___ ___ LOC
- ___ ___ ___ LOC/BC (optional)
- ___ ___ ___ VOR
- ___ ___ ___ GPS
- ___ ___ ___ Radar - ASR or PAR (optional)
- ___ ___ ___ Missed approach
- ___ ___ ___ Landing from straight-in / circling approach
- ___ ___ ___ Risk elements

**INSTRUMENT LESSON 16
FLIGHT REVIEW FOR END OF COURSE EVALUATION
(CONTINUED)**

EMPHASIS AREAS

- ___ ___ ___ Positive aircraft control
- ___ ___ ___ Positive exchange of flight controls
- ___ ___ ___ LAHSO
- ___ ___ ___ CFIT
- ___ ___ ___ ADM and RM
- ___ ___ ___ Checklist usage

IFR EMERGENCY OPERATIONS

- ___ ___ ___ Takeoff, enroute, approach
- ___ ___ ___ Communications failure
- ___ ___ ___ Electrical failure
- ___ ___ ___ Pitot / static system failure
- ___ ___ ___ GPS failure
- ___ ___ ___ AHRS/ADC failure
- ___ ___ ___ Risk elements

POSTFLIGHT PROCEDURES

- ___ ___ ___ Checking instruments and equipment
- ___ ___ ___ Debrief
- ___ ___ ___ Update TCO and logbook
- ___ ___ ___ Risk elements

COMPLETION STANDARDS

The student will perform instrument cross-country planning and flying procedures while maintaining the following:

1. Altitude ± 100 feet
2. Headings $\pm 10^\circ$
3. Airspeed within ± 10 knots
4. Climbs and descents at specified rate ± 100 feet or as per the latest FAA Instrument PTS

	Flight	Inst	Total Inst	Instructor	Student	Date	Aircraft Type	Tail Number
Previous								
This Lesson								
Total								

COMMENTS

UD INSTRUMENT RATING END-OF-COURSE EVALUATION—PAGE 1

OBJECTIVE: The application will display the knowledge, skills, and risk management elements necessary to obtain an Instrument Rating.

TIME: As required

Student _____ **Examiner** _____ **Date** _____

EVALUATION PRELIMINARIES

- ___ ___ ___ Drivers license—current picture ID
- ___ ___ ___ Private certificate—current
- ___ ___ ___ Log endorsements—correct
- ___ ___ ___ Medical certificate—current 3rd class or higher
- ___ ___ ___ 8710 Form completed, dated, signed
- ___ ___ ___ Knowledge test report—current, 70 or better, test deficiencies signed off by the instructor
- ___ ___ ___ Certificate of Enrollment—completed
- ___ ___ ___ TCO—completed
- ___ ___ ___ Ground school sign off verified

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 Area of Operation and Task. Additionally, the evaluator must include each task element(s) the applicant missed on the Knowledge test.

I. PREFLIGHT PREPARATION

- ___ ___ ___ Pilot qualifications
- ___ ___ ___ Weather information
- ___ ___ ___ Cross-Country flight planning

II. PREFLIGHT PROCEDURES

- ___ ___ ___ Aircraft systems related to IFR ops
- ___ ___ ___ Flight instruments & Nav Equip.
- ___ ___ ___ Instrument cockpit check
- ___ ___ ___ Weight and Balance

III. ATC CLEARANCES AND PROCEDURES

- ___ ___ ___ ATC clearances (actual or simulated)
- ___ ___ ___ Compliance with all clearances
- ___ ___ ___ Holding procedures

IV. FLIGHT BY REFERENCE TO INSTRUMENTS

- ___ ___ ___ Basic instrument maneuvers
- ___ ___ ___ Recovery from unusual attitudes

V. NAVIGATION SYSTEMS

- ___ ___ ___ Intercepting & tracking Nav systems and DME arcs
- ___ ___ ___ Departure, enroute, and arrival Ops.

VI. INSTRUMENT APPROACH PROCEDURES

- ___ ___ ___ Non-precision approach
 - ___ ___ ___ Full panel
 - ___ ___ ___ Partial panel
- ___ ___ ___ Precision approach
- ___ ___ ___ Missed approach
- ___ ___ ___ Circling approach
- ___ ___ ___ Landing from a straight-in or circling approach

UD INSTRUMENT RATING END-OF-COURSE EVALUATION—PAGE 2

OBJECTIVE: The student will display the knowledge and skills necessary to receive an Instrument Rating.

TIME: As required

VII. EMERGENCY OPERATIONS

____ ____ ____ Loss of communications

____ ____ ____ Approach with loss of primary flight instruments

Note: This approach shall count as one of the required non-precision approaches.

VIII. POSTFLIGHT PROCEDURES

____ ____ ____ Check instruments and equipment

COMPLETION STANDARDS

The student pilot must meet the requirements of FAA publication FAA-ACS-8081-4E, or latest Instrument Rating Practical Test Standards.

FLIGHT 1

Examiner _____

Student _____

Date _____

Oral Time _____

Flight Time _____

FLIGHT 2

Examiner _____

Student _____

Date _____

Oral Time _____

Flight Time _____

FLIGHT 3

Examiner _____

Student _____

Date _____

Oral Time _____

Flight Time _____

TOTAL ORAL TEST TIME

TOTAL FLIGHT TEST TIME

AIRCRAFT N #

MEMO

TO: Chief Instructor, University of Dubuque Flight Center

FROM: Chief Ground Instructor / Instructors

DATE:

RE: Instrument Rating Ground School Graduation

The following student has successfully completed all the requirements for the Instrument Rating Ground School Course:

Instructor

Student

INSTRUMENT RATING

Hours Ground Training Course

Objectives

The objective of the course is to provide students with aeronautical knowledge to specified in 14 CFR 61

Stage 1—a minimum of 14.0 ground training hours
Stage 2—a minimum of 12.0 ground training hours
Stage 3—a minimum of 6.0 ground training hours
Minimum of 32.0 ground training hours

ground training course the necessary meet the prerequisites and 141 for the FAA

Instrument Helicopter 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 Instrument Helicopter Knowledge Examination. A passing grade of 80% on all stage examinations and an end-of-course examination will be required for completion.

INSTRUMENT RATING

Ground Training Course

STAGE 1
Lessons 1-6

Stage 1 Objectives

The student will be introduced to the principles of instrument flight , limitations of flight instruments and navigations receivers / operation of flight equipment. The student will obtain a basic knowledge of the limitations of the human body and pertinent physiological factors related to instrument flight. The student will also be introduced to the role of ATC in the National Airspace System and the instrument flight publications necessary for IFR planning and flight. Emphasis will be placed on FARs and AIM information applicable to instrument flight.

14.0 hours (minimum) of ground training systems, and the proper instruments and navigation

Stage 1 Completion Standards

This stage will be 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

THE INSTRUMENT PROFESSIONAL PILOT

TIME 2 Hours

OBJECTIVES

- ☐ Become familiar with the advantages and capabilities of an instrument rated pilot.
- ☐ Gain a better understanding human factors and aviation physiology as they relate to instrument flight.
- ☐ Become familiar with UD TCO for instrument rating.

INSTRUMENT TRAINING—PART 61

- Eligibility requirements
- Types of training available
- Phases of training
- Instrument pilot privileges and limitations
- Commercial pilot privileges
- Additional ratings

DECISION MAKING

- The decision making process
- CRM
- PIC responsibility
- Resource and work load management
- Situational awareness
- Judgment

PHYSIOLOGY—AIM CH. 8 / IFH CH. 3

- Fitness for flight
- Alcohol and drugs
- Fatigue
- Stress
- Spatial disorientation
- Vestibular disorientation
- Hypoxia
- Decompression sickness
- Hyperventilation
- Tricks of mind and body

LESSON COMPLETION STANDARDS

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

ASSIGNED READING

Reading and homework for the next lesson will be assigned as required.

LESSON 2

BASIC INSTRUMENT FLIGHT

TIME 3 Hours

OBJECTIVES

- ☐ Develop working knowledge of flight instruments and components.
- ☐ Become familiar with the limitations and errors of flight instruments and components.
- ☐ Review basic principles of altitude instrument flight.
- ☐ Understand fundamental skills associated with instrument cross-check, instrument interpretation and aircraft control.
- ☐ Introduce partial panel flight procedures.

FLIGHT INSTRUMENTS—91.205 / IFH CH. 5

- Gyroscope
- Magnetic compass
- Pitot-static

FUNDAMENTAL SKILLS—IFH CH. 8

- Cross-check
- Interpretation
- Aircraft control
- Primary / support instrument concept

FLIGHT MANEUVERS—IFH CH. 8

- Straight and level
- Standard rate turns
- Steep turns
- Constant airspeed climbs and descents
- Constant rate climbs and descents
- Climbing and descending turns
- Unusual attitude recovery
- Partial panel considerations

INSTRUMENT FAILURES—IFH CH. 5 & 11

- Identification
- Attitude indicator
- Heading indicator
- Compass / timed turns
- Pitot-static

LESSON COMPLETION STANDARDS

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

ASSIGNED READING

Reading and homework for the next lesson will be assigned as required.

LESSON 3
INSTRUMENT NAVIGATION

TIME 3 Hours

OBJECTIVES

- ﻻ Learn the operation of VOR, DME and GPS for navigation and its associated limitations.
- ﻻ Become familiar with RNAV systems.

VOR NAVIGATION—IFH CH. 9 / AIM CH. 1

- HSI / OBS
- Intercepting / tracking a radial
- Time and distance to a station
- Station passage
- VOR checks and limitations
- DME operations

RNAV—IFH CH. 9 / AIM CH. 1

- VORTAC based
- GPS

LESSON COMPLETION STANDARDS

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

ASSIGNED READING

Reading and homework for the next lesson will be assigned as required.

LESSON 4
FAR / AIM WORKSHOP

TIME 2 Hours

OBJECTIVES

- ﻻ Acquire knowledge on applicable Federal Aviation Regulations, NTSB regulations and reports, and appropriate Aeronautical Information Manual, as they pertain to instrument flight.
- ﻻ Gain greater understanding of the National Airspace System and the instrument environment in which pilots operate.

RULES AND REGULATIONS

- FAR Part 1
- FAR Part 61
- FAR Part 91
- FAR Part 97
- FAR Part 141
- NTSB Part 830
- AIM Ch. 1-10
- Pilot/Controller Glossary

ENVIRONMENT—AIM CH. 2, 3, 4

- Airport
- Airspace
- Flight information

LESSON COMPLETION STANDARDS

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

ASSIGNED READING

Reading and homework for the next lesson will be assigned as required.

LESSON 5
ATC

TIME 2 Hours

OBJECTIVES

-  Learn the services provided by ATC
-  Become familiar with enroute and terminal facilities.
-  Understand the elements of a clearance.

ATC SYSTEM

- ARTCC
- Weather information
- Safety alerts
- ATIS
- Clearance delivery procedures
- Approach and departure control
- FSS

CLEARANCES—AIM CH. 4, SECTION 4

- Pilot responsibilities
- Flight plan
- Elements of a clearance
- VFR restrictions
- Departure procedures and restrictions
- Clearance shorthand and read back

LESSON COMPLETION STANDARDS

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

ASSIGNED READING

Reading and homework for the next lesson will be assigned as required.

LESSON 6
STAGE 1 EXAMINATION

TIME 2 Hours

OBJECTIVES

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

EXAMINATION

- Aviation physiology
- Decision making
- Basic instrument skills
- Instrument NAV
- FAR / AIM
- Airport environment
- ATC system
- Clearances

LESSON COMPLETION STANDARDS

This lesson and stage are complete when the student has completed the stage examination with a minimum grade of 80%. A pass rate of 80% corrected to 100% is required.

ASSIGNED READING

Reading and homework for the next lesson will be assigned as required.

INSTRUMENT RATING

Ground Training Course

STAGE 2
Lessons 7-10

Stage 2 Objectives

The student will learn the procedures used when flying IFR approaches. In addition, they will learn to transition to the departure and arrive 12.0 hours (minimum) of ground training enroute structure via procedures.

Stage 2 Completion Standards

This stage will be 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
IFR DEPARTURES
IFH CH. 1 & 10

TIME 3 Hours

OBJECTIVES

- ☞ Gain an understanding of departure chart information.
- ☞ Understand DP procedures and selection of a departure method.

DEPARTURES

- DPs
- Symbols
- Vector DP
- Pilot NAV DP
- Departure standards

PROCEDURES

- Takeoff minimums
- Options
- Textual procedures
- Radar departures
- VFR departures
- Departure selection decision making

LESSON COMPLETION STANDARDS

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

ASSIGNED READING

Reading and homework for the next lesson will be assigned as required.

LESSON 8
ENROUTE PROCEDURES

TIME 3 Hours

OBJECTIVES

- ☞ Gain proficiency in the use of area and enroute charts.
- ☞ Learn IFR charting symbols.
- ☞ Understand holding patterns and usage.

IFR CHARTS—IFH CH. 1

- Enroute
- Symbols
- Area
- Navigation aids
- Victor airways
- Airspace

HOLDING—IFH CH. 10

- Patterns
- Timing
- Crosswind corrections
- Speeds
- Entry procedures
- ATC communications

PROCEDURES—IFH CH. 10

- Radar
- Reporting
- Communications
- RNAV
- Special use airspace
- Transitions to the arrival

LESSON COMPLETION STANDARDS

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

ASSIGNED READING

Reading and homework for the next lesson will be assigned as required.

LESSON 9
APPROACHES
AIM CH. 5, SECTION 4
IFH CH. 10

TIME 4 Hours

OBJECTIVES

- 1. Understand the procedures and methods to transition to an approach.
- 2. Understand charting symbols.
- 3. Gain an understanding of VOR approaches.
- 4. Gain an understanding of ILS components and approach procedures.
- 5. Gain an understanding of RNAV approach procedures.

ARRIVAL

- STAR
- Vertical navigation planning
- Reviewing the approach
- Altitude and airspeed management

APPROACH SEGMENTS

- Initial
- Intermediate
- Final
- Missed

CHARTS

- Heading
- Plan view
- Profile views
- Step down fix and VDP
- Landing minimums
- Approach categories
- Minimum descent requirements
- Visibility required
- Inoperative components
- Runway information
- ALT takeoff and landing minima
- Helicopter only—AIM CH. 10, SECTION 1

PROCEDURES

- Reviewing the approach
- Clearance
- Straight in
- Use of ATC radar
- Course reversal
- Timed approaches
- Circling
- Side step
- Missed approach
- Visual and contact approaches

LESSON 9
(CONTINUED)

APPROACHES—IFH CH. 10 / AIM CH. 1 & 10

- VOR
- ILS
- RNAV / GPS
- Helicopter

LESSON COMPLETION STANDARDS

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

ASSIGNED READING

Reading and homework for the next lesson will be assigned as required.

LESSON 10
STAGE 2 EXAMINATION

TIME 2 Hours

OBJECTIVES

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

EXAMINATION

- Departures
- Enroute procedures
- Approaches

LESSON COMPLETION STANDARDS

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

ASSIGNED READING

Reading and homework for the next lesson will be assigned as required.

INSTRUMENT RATING

Ground Training Course

STAGE 3
Lessons 11-15

Stage 3 Objectives

6.0 hours (minimum) of ground training

Stage 3 Completion Standards

The student will accurately analyze weather information and apply it to IFR planning and IFR decision making. Emphasis will be placed on emergency procedures and the decision making process.

This stage will be 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 end-of-course examination. Additionally, the student will pass a randomly selected set of questions in the form of a comprehensive examination with a score of 80% or better being allowed to proceed to the FAA instrument rating airmen knowledge test.

LESSON 11
WEATHER FACTORS AND HAZARDS
IFH CH. 4 & 11

TIME 1 Hour

OBJECTIVES

-  Gain a better understanding of the weather factors as they effect IFR flight.
-  Become familiar with weather patterns and hazards that effect IFR flight operations.

WEATHER FACTORS

- Atmospheric conditions and circulation
- Pressure and wind patterns
- Clouds and air mass(es)
- Moisture, precipitation and stability
- Fronts and high altitude weather

WEATHER HAZARDS

- Thunderstorms and avoidance
- Turbulence
- Wind shear and avoidance
- Icing and cold weather operations
- Low visibility
- Volcanic ash

RISK ANALYSIS

- Critical weather situations
- Wind shear situations

LESSON COMPLETION STANDARDS

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

ASSIGNED READING

Reading and homework for the next lesson will be assigned as required.

LESSON 12
WEATHER PRODUCTS AND SOURCES
AIM CH. 7, SECTION 1
PILOT'S HANDBOOK OF AERONAUTICAL
KNOWLEDGE CH. 12

TIME 1 Hour

OBJECTIVES

-  Locate and interpret printed weather reports and forecasts.
-  Locate and interpret graphic weather products.
-  Learn how to manage in-flight sources of weather.

REPORTS

- METAR
- Radar
- Area
- TAF
- Winds aloft
- Severe weather

SOURCES

- FSS
- Private industry
- Airmets and Sigmets
- Convective Sigmets
- EFAS
- Center weather advisory
- TWEBs
- ASOS / AWOS

PRODUCTS

- Surface analysis chart
- Weather depiction chart
- Radar summary chart
- Satellite pictures
- Composite Moisture Stability chart
- Constant Pressure Analysis chart
- Observed Winds and Temperature Aloft chart
- Airborne radar
- Airborne lightning detection systems

LESSON COMPLETION STANDARDS

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

ASSIGNED READING

Reading and homework for the next lesson will be assigned as required.

LESSON 13
IFR EMERGENCIES
IFH CH. 11 / 91.167, 91.185, 91.187

TIME 1 Hour

OBJECTIVES

- ﷽ Recognize emergency situations.
- ﷽ Understand the decision making process to enhance the selection of correct emergency actions.

EMERGENCIES

- Declaring an emergency
- Minimum fuel
- Gyroscopic instrument
- Communications
- Approach procedures
- Malfunction reports

DECISION MAKING

- Managing risk
- Mitigation strategies
- PIC responsibility
- Attitude
- CRM to include communication and coordination
- Situational awareness
- Judgement

LESSON COMPLETION STANDARDS

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

ASSIGNED READING

Reading and homework for the next lesson will be assigned as required.

LESSON 14
IFR FLIGHT PLANNING

IFH CH. 10 / 91.169, 91.173, 91.179, 91.181

TIME 1 Hour

OBJECTIVES

- ﷽ Demonstrate the knowledge necessary to plan an IFR flight.
- ﷽ Determine critical factors related to decision making.

FLIGHT PLANNING

- Route selection
- Flight publications
- Weather considerations / decisions
- Altitude selections
- Navigation log
- Filing, opening and closing flight plan

LESSON COMPLETION STANDARDS

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

ASSIGNED READING

Reading and homework for the next lesson will be assigned as required.

LESSON 15
STAGE 3 EXAMINATION

TIME 2 Hours

OBJECTIVES

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

EXAMINATION

- Weather factors and hazards
- Weather products and sources
- IFR emergencies
- Aeronautical IFR decision making
- Flying IFR

LESSON COMPLETION STANDARDS

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

LESSON 16
INSTRUMENT RATING GROUND SCHOOL
END-OF-COURSE EXAMINATION

OBJECTIVES

Demonstrate comprehension of the material presented in this course and the student's readiness to complete the FAA Instrument Rating Knowledge Test.

LESSON COMPLETION STANDARDS

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

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

Instrument Rotorcraft Helicopter Pilot Rating Course

conducted by the University of Dubuque, School Number GV8SI78Q.

Private Pilot Certification Course - Appendix B, Paragraphs 4 and 5
Instrument Rating Course - Appendix C, Paragraph 4(c)(1)(i-iv)
Commercial Pilot Certification Course - Appendix D, Paragraphs 4 and 5
Multi-Engine Course - Additional Aircraft Category or Class Rating - Appendix I, Paragraphs 3 and 4
Flight Instructor Certification Course (Airplane, Single-Engine) - Appendix F
Flight Instructor Instrument Certification Course (Airplane, Single-Engine) - Appendix G

UNIVERSITY of DUBUQUE



A V I A T I O N

Date of Graduation

I certify that the above statements are true.

Chief Flight Instructor