



UNIVERSITY *of*
DUBUQUE

INSTRUMENT RATING
TRAINING COURSE OUTLINE



UNIVERSITY *of* DUBUQUE

INSTRUMENT RATING TRAINING COURSE OUTLINE

UNIVERSITY *of* DUBUQUE

This is to certify that

_____ is enrolled in the FAA approved

INSTRUMENT RATING COURSE

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

FTN #

AIR AGENCY CERTIFICATE NO. GV8S178Q

Pilot's Legal Name _____ SODA 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 _____ 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>7-1-2002</u>
2	<u>Original</u>	<u>7-1-2002</u>
3	<u>Revision 15</u>	<u>9-15-2019</u>
4	<u>Original</u>	<u>7-1-2002</u>
5	<u>Revision 16</u>	<u>5-13-2021</u>
6	<u>Revision 14</u>	<u>6-1-2019</u>
7	<u>Revision 15</u>	<u>9-15-2019</u>
7a	<u>Revision 16</u>	<u>5-13-2021</u>
8	<u>Revision 14</u>	<u>6-1-2019</u>
9	<u>Revision 15</u>	<u>9-15-2019</u>
10	<u>Revision 1</u>	<u>2-7-2003</u>
11	<u>Revision 1</u>	<u>2-7-2003</u>
12	<u>Revision 15</u>	<u>9-15-2019</u>
13	<u>Revision 12</u>	<u>5-31-2016</u>
14	<u>Revision 15</u>	<u>9-15-2019</u>
15	<u>Revision 15</u>	<u>9-15-2019</u>
16	<u>Revision 15</u>	<u>9-15-2019</u>
17	<u>Revision 15</u>	<u>9-15-2019</u>

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18	<u>Revision 2</u>	<u>1-9-2014</u>
19	<u>Revision 15</u>	<u>9-15-2019</u>
20	<u>Revision 15</u>	<u>9-15-2019</u>
21	<u>Revision 1</u>	<u>2-7-2003</u>
22	<u>Revision 15</u>	<u>9-15-2019</u>
23	<u>Revision 15</u>	<u>9-15-2019</u>
24	<u>Revision 15</u>	<u>9-15-2019</u>
25	<u>Revision 15</u>	<u>9-15-2019</u>
26	<u>Revision 15</u>	<u>9-15-2019</u>
27	<u>Revision 15</u>	<u>9-15-2019</u>
28	<u>Revision 12</u>	<u>5-31-2016</u>
29	<u>Revision 15</u>	<u>9-15-2019</u>
30	<u>Revision 15</u>	<u>9-15-2019</u>
31	<u>Revision 15</u>	<u>9-15-2019</u>
32	<u>Revision 15</u>	<u>9-15-2019</u>
33	<u>Revision 12</u>	<u>5-31-2016</u>
34	<u>Revision 2</u>	<u>1-9-2014</u>
35	<u>Revision 1</u>	<u>2-7-2003</u>
36	<u>Revision 9</u>	<u>8-6-2014</u>
36a	<u>Revision 12</u>	<u>5-31-2016</u>
37	<u>Revision 15</u>	<u>9-15-2019</u>
38	<u>Revision 12</u>	<u>5-31-2016</u>
39	<u>Revision 12</u>	<u>5-31-2016</u>
40	<u>Revision 12</u>	<u>5-31-2016</u>
41	<u>Revision 12</u>	<u>5-31-2016</u>
42	<u>Revision 15</u>	<u>9-15-2019</u>
43	<u>Revision 12</u>	<u>5-31-2016</u>
44	<u>Revision 12</u>	<u>5-31-2016</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—Airplane

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; Airplane.

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; Airplane 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.

An Advanced Aviation Training device (AATD) may be used in this course as outlined in 14 CFR 141 and AC 61-136. An aircraft may be used to fulfill the instrument training requirement of those lessons if the training devices are not available or desired.

TRAINING DEVICES

The FRASCA Mentor, FRASCA RTD, Redbird SD, and an ALSIM AL250 are approved Advanced Aviation Training Devices that are available for training in accordance with their respective FAA Letter of Authorization.

AIRCRAFT

Cessna 172, Piper PA-28R, and Piper PA-44-180 are available for flight training.

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, Airplane Single Engine Land—Instrument. When training in the PA-44-180 the Flight Instructor will have a current Certified Flight Instructor Instrument Rating as well as an Airplane Multi-Engine Land Instructor Rating. 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 141.35, Subpart B.

CHIEF AND ASSISTANT CHIEF INSTRUCTORS

The Chief Flight Instructor for the Instrument Rating Airplane Course is Ms. Suzanne Peterson certificate #2801778.

The Chief Ground Instructor for the Instrument Rating Airplane Course is Ms. Polly Kadolph certificate #3689827.

The following persons have been authorized as Assistant Chief Flight Instructors for the Instrument Rating Airplane Course: Mr. Michael J. Glynn certificate #2883378, Mr. Robert Anthony (Tony) Foster certificate #3213651, Mr. Kyle F. Jones certificate #3755779, Mr. Jack D. Erickson certificate #3891398, and Mr. Ching-Kuan Su certificate #3540078.

ENROLLMENT PREREQUISITES

Students must be able to write, read, speak, and understand the English language and possess a Private Pilot Certificate with at least a 3rd class 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 have access to a copy of the University of Dubuque Student Flight Operations Manual 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 Airman Certification 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.

MINIMUM INSTRUMENT RATING FLIGHT TRAINING

	Simulated or Actual Instrument	FTD, AATD, BATD Instrument	TOTAL
STAGE 1	6.0	14.0	20.0
STAGE 2	15.0	0	15.0
TOTALS	21.0	14.0	35.0

Total minimum Instrument Rating flight training time is 35.0 hours.
The maximum AATD time is 14 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.

IOWA

Cedar Rapids (CID) - 54
Independence (IIB) - 55
Oelwein (OLZ) - 58
Vinton (VTI) - 60
Monticello (MXO) - 26
Maquoketa (QQW) - 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
Prairie Du Chien (PDC) - 43

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

APPROVED CROSS-COUNTRY ROUTES

At least one cross-country flight with a minimum distance of 250 nm along airways or ATC directed routing to include at least 100 nm straight line distance between airports and three different kinds of instrument approaches.

- ✓ KDBQ—KRST—KMIW—KDBQ
- ✓ KDBQ—KPIA—KIOW—KDBQ
- ✓ KDBQ—KMSN—KSTE—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) (1).

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
V_x—best angle of climb
V_y—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

Training Course Outline

STAGE ONE

Initial Flight Training

Lessons 1—12

14.0 hours (approx) of Ground Flight Training Device (AATD)

6.0 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

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
- ____ Airman Certification Standards

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

AIR TRAFFIC CONTROL FACILITIES

- ____ Tower
- ____ Communication Frequencies
- ____ LAHSO
- ____ Navigation Facilities

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

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 complet-

POSTBRIEF

- ____ Update TCO

Instructor

Student

Date

_____	_____	_____
_____	_____	_____
_____	_____	_____

Hours

INSTRUMENT LESSON 2

AATD or ACFT—BASIC INSTRUMENT FLIGHT PROCEDURES

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

TIME: Approx 2.0 hours

PREFLIGHT BRIEFING

- Briefing on the Lesson
Documents and required instrument checks
Wake turb, wind shear, collision avoidance
Incursion avoidance - call all hold short lines
Weather
Enroute charts, approach plates, sectionals
Flight equipment—kneeboard, pencils, etc.

PREFLIGHT PREPARATION

- IFR cockpit ✓—ARROW
Tests—VOR, Transponder, Alternate-Static, Altimeter, 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—copy and review
IFR clearance—copy, confirm, comply

TAXI AND RUNUP

- Taxi ✓
Taxi Clearance—copy, confirm, comply
Taxi—wind, brakes, steering, speed, hazards
Gyros and compass check—first turn
Flight Instrument Check
Runup ✓

TAKEOFF / CLIMB

- Takeoff ✓
Takeoff clearance—copy, confirm, comply
Takeoff—normal
Climb 500' then "on course"
Climb ✓
Tower handoff / Center Check-in
Center Clearance—copy, confirm, comply

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
Throttle settings / speeds
Constant speed / rate descents
Descents with turns
Level-off from descent procedure
Steep turns
Slow flight
Stalls
Recover from unusual altitudes
Partial panel, all maneuvers above

INSTRUMENT LESSON 2
AATD or ACFT—BASIC INSTRUMENT FLIGHT PROCEDURES
(CONTINUED)

LANDING

___ ___ ___ Landing ✓
 ___ ___ ___ Landing clearance—*copy, confirm, comply*
 ___ ___ ___ Stabilized approach
 ___ ___ ___ Roundout—*height, crosswind cx*
 ___ ___ ___ Touchdown—*drift, centerline, full stall*
 ___ ___ ___ Taxi ✓—*wind, speed, braking, hazards*
 ___ ___ ___ Taxi clearance—*copy, confirm, comply*
 ___ ___ ___ 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	AATD	Total Inst	Instructor	Student	Date	Aircraft Type	Tail Number
This Lesson									
Total									

COMMENTS

Hours

INSTRUMENT LESSON 3

AATD or ACFT—INTERCEPTING AND TRACKING NAVIGATION FACILITIES

OBJECTIVE: The student will practice navigation intercepting and tracking procedures.

TIME: Approx 1.0 hour

PREFLIGHT BRIEFING

- ____ _ Briefing on the Lesson
- ____ _ Documents and required instrument checks
- ____ _ Wake turb, wind shear, collision avoidance
- ____ _ Incursion avoidance—call all hold short lines
- ____ _ 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, 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—*copy and review*
- ____ _ IFR clearance—*copy, confirm, comply*

TAXI AND RUNUP

- ____ _ Taxi ✓
- ____ _ Taxi Clearance—*copy, confirm, comply*
- ____ _ Taxi—*wind, brakes, steering, speed, hazards*
- ____ _ Gyros and compass check—*first turn*
- ____ _ Flight instrument check
- ____ _ Runup ✓

TAKEOFF / CLIMB

- ____ _ Takeoff ✓
- ____ _ Takeoff clearance—*copy, confirm, comply*
- ____ _ Takeoff—*normal*
- ____ _ Climb 500' then "on course"
- ____ _ Climb ✓
- ____ _ Tower handoff / Center check-in
- ____ _ Center Clearance—*copy, confirm, comply*

BASIC INSTRUMENT FLIGHT

- ____ _ Constant Speed / Rate Climbs with turns
- ____ _ Level-off procedure
- ____ _ Cruise checklist ✓—*trim & mixture*
- ____ _ Radial scan
- ____ _ Straight and level with turns
- ____ _ Turns—*headings, standard & 1/2 rate, timed*
- ____ _ Throttle settings vs. speeds
- ____ _ Constant speed / rate descents with turns
- ____ _ Partial panel

INTERCEPTING / TRACKING

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

LANDING

- ____ _ Landing ✓
- ____ _ Landing clearance—*copy, confirm, comply*
- ____ _ Stabilized approach
- ____ _ Use of flaps
- ____ _ Landing—*centerline, drift, roundout, touchdown*
- ____ _ Taxi ✓—*wind, speed, braking, hazards*
- ____ _ Shutdown ✓
- ____ _ Postflight inspection

INSTRUMENT LESSON 3
AATD or ACFT—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	AATD	Total Inst	Instructor	Student	Date	Aircraft Type	Tail Number
Previous									
This Lesson									
Total									

COMMENTS

Hours

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

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

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

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

INSTRUMENT LESSON 5

AATD or ACFT—VOR, GPS, DME AND INTERSECTION HOLDING PROCEDURES

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

TIME: Approx 3.0 hours

PREFLIGHT BRIEFING

- ___ ___ ___ Briefing on the Lesson
- ___ ___ ___ Documents and required instrument checks
- ___ ___ ___ Wake turb, wind shear, collision avoidance
- ___ ___ ___ Incursion avoidance—*call all hold short lines*
- ___ ___ ___ 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—*copy and review*
- ___ ___ ___ IFR clearance—*copy, confirm, comply*

TAXI AND RUNUP

- ___ ___ ___ Taxi ✓
- ___ ___ ___ Taxi Clearance—*copy, confirm, comply*
- ___ ___ ___ Taxi—*wind, brakes, steering, speed, hazards*
- ___ ___ ___ Gyros and compass check—*first turn*
- ___ ___ ___ Flight Instrument Check
- ___ ___ ___ Runup ✓

TAKEOFF / CLIMB

- ___ ___ ___ Takeoff ✓
- ___ ___ ___ Takeoff clearance—*copy, confirm, comply*
- ___ ___ ___ Takeoff—*normal*
- ___ ___ ___ Climb 500' then "on course"
- ___ ___ ___ Climb ✓
- ___ ___ ___ Tower handoff / Center Check-in
- ___ ___ ___ Center Clearance—*copy, confirm, comply*

BASIC INSTRUMENT FLIGHT

- ___ ___ ___ Constant Speed / Rate Climbs with turns
- ___ ___ ___ Level-off procedure
- ___ ___ ___ Cruise checklist ✓—*trim & mixture*
- ___ ___ ___ 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 or ACFT—HOLDING PROCEDURES
(CONTINUED)

HOLDING PROCEDURES—STANDARD / NON-STANDARD

___	___	___	Holding clearance—copy, confirm, comply
___	___	___	Drawing the hold, entry, and wind
___	___	___	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

LANDING

___	___	___	Landing ✓
___	___	___	Landing clearance—copy, confirm, comply
___	___	___	Stabilized approach
___	___	___	Landing—centerline, drift, roundout, touchdown, full stall
___	___	___	Taxi ✓—wind, speed, braking, hazards
___	___	___	Taxi clearance—copy, confirm, comply
___	___	___	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	AATD	Total Inst	Instructor	Student	Date	Aircraft Type	Tail Number
Previous									
This Lesson									
Total									

COMMENTS

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— <i>ATIS, AWOS, ASOS</i>
___	___	___	Brief approach
___	___	___	Set frequencies and ID stations
___	___	___	Tracking to the IAF

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
___	___	___	Confirm landing checklist
___	___	___	Transitioning to visual approach
___	___	___	Beginning the Missed Approach Procedure

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

MISSED APPROACH SEGMENT

___	___	___	Transition to missed approach
___	___	___	Call ATC re: "... going missed!"
___	___	___	ATC Clearance—copy, confirm, comply

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 the segments of the approach.
2. Accurately describe the procedures to be used in each segment.

Instructor

Student

Date

_____	_____	_____
_____	_____	_____
_____	_____	_____

Hours

INSTRUMENT LESSON 7

AATD or ACFT—FLYING NON-PRECISION APPROACH PROCEDURES

OBJECTIVE: Instructor will demonstrate and student will practice non-precision approach procedures.

TIME: Approx 6.0 hours

PREFLIGHT BRIEFING

- ___ ___ ___ Briefing on the Lesson
- ___ ___ ___ Documents and required instrument checks
- ___ ___ ___ Wake turb, wind shear, collision avoidance
- ___ ___ ___ Incursion avoidance—*call all hold short lines*
- ___ ___ ___ Weather
- ___ ___ ___ FAR AIM, enroute charts, approach plates
- ___ ___ ___ Flight equipment—*kneeboard, pencils, etc.*

TAKEOFF / CLIMB

- ___ ___ ___ Takeoff ✓
- ___ ___ ___ Takeoff clearance—*copy, confirm, comply*
- ___ ___ ___ Takeoff—*normal*
- ___ ___ ___ Climb 500' then "on course"
- ___ ___ ___ Climb ✓
- ___ ___ ___ Tower handoff / Center Check-in
- ___ ___ ___ Center Clearance—*copy, confirm, comply*

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

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

STARTUP

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

INITIAL / INTERMEDIATE FIX TO FAF

- ___ ___ ___ Timing outbound from the IAF
- ___ ___ ___ Landing ✓
- ___ ___ ___ 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, if required

TAXI AND RUNUP

- ___ ___ ___ Taxi ✓
- ___ ___ ___ Taxi Clearance—*copy, confirm, comply*
- ___ ___ ___ Taxi—*wind, brakes, steering, speed, hazards*
- ___ ___ ___ Gyros and compass check—*first turn*
- ___ ___ ___ Flight Instrument Check
- ___ ___ ___ Runup ✓

INSTRUMENT LESSON 7
AATD or ACFT—FLYING NON-PRECISION APPROACH PROCEDURES
(CONTINUED)

FAF TO MAP

___ ___ ___ Start time
 ___ ___ ___ Maintaining track / course
 ___ ___ ___ Begin descent to MDA
 ___ ___ ___ Inform ATC
 ___ ___ ___ Confirm landing √
 ___ ___ ___ 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—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 ±15°
3. Airspeed within ±10 knots
4. Climbs and descents at specified rate ±200 feet

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

COMMENTS

Hours

INSTRUMENT LESSON 8

AATD or ACFT—FLYING PRECISION APPROACH PROCEDURES

OBJECTIVE: The student, under instructor guidance, will practice flying precision approach procedures.

TIME: Approx 3.0 hours

PREFLIGHT BRIEFING

- ____ Briefing on the Lesson
____ Documents and required instrument checks
____ Wake turb, wind shear, collision avoidance
____ Incursion avoidance—call all hold short lines
____ Weather
____ FAR AIM, enroute charts, approach plates
____ Flight equipment—kneeboard, pencils, etc.

TAKEOFF / CLIMB

- ____ Takeoff ✓
____ Takeoff clearance—copy, confirm, comply
____ Takeoff—normal
____ Climb 500' then "on course"
____ Climb ✓
____ Tower handoff / Center Check-in
____ Center Clearance—copy, confirm, comply

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

FLYING TO THE IAF

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

STARTUP

- ____ Engine Start ✓
____ Comm radio setup—freq, vol, transmitter
____ Nav radio setup—freq, ID, set course
____ ATIS—copy and review
____ IFR clearance—copy, confirm, comply

IAF TO INTERMEDIATE FIX

- ____ Timing outbound from the IAF
____ Landing ✓
____ Timing/flying Procedure Turn outbound
____ Remaining within protected airspace
____ Intercepting the inbound course to IF
____ Reviewing the Missed Approach Procedure

TAXI AND RUNUP

- ____ Taxi ✓
____ Taxi Clearance—copy, confirm, comply
____ Taxi—wind, brakes, steering, speed, hazards
____ Gyros and compass check—first turn
____ Flight Instrument Check
____ Runup ✓

IF TO FAF

- ____ Confirm track / course
____ Begin descent, if required
____ Intercepting / descending on glide slope

INSTRUMENT LESSON 8
AATD or ACFT—FLYING PRECISION APPROACH PROCEDURES
(CONTINUED)

FAF TO MAP (the DA)

- ___ ___ ___ Start timing
- ___ ___ ___ Maintaining track / course
- ___ ___ ___ Descending on glide slope
- ___ ___ ___ Inform ATC
- ___ ___ ___ Confirm landing ✓
- ___ ___ ___ 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—*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	AATD	Total Inst	Instructor	Student	Date	Aircraft Type	Tail Number
Previous									
This Lesson									
Total									

COMMENTS

Hours

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INSTRUMENT LESSON 9

AATD or ACFT—FLYING DME ARCS

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

TIME: Approx 1.0 hour

PREFLIGHT BRIEFING

- ___ ___ ___ Briefing on the Lesson
- ___ ___ ___ Documents and required instrument checks
- ___ ___ ___ Wake turb, wind shear, collision avoidance
- ___ ___ ___ Incursion avoidance—*call all hold short lines*
- ___ ___ ___ Weather
- ___ ___ ___ FAR AIM, enroute charts, approach plates, WACs
- ___ ___ ___ 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—*copy and review*
- ___ ___ ___ IFR clearance—*copy, confirm, comply*

TAXI AND RUNUP

- ___ ___ ___ Taxi ✓
- ___ ___ ___ Taxi Clearance—*copy, confirm, comply*
- ___ ___ ___ Taxi—*wind, brakes, steering, speed, hazards*
- ___ ___ ___ Gyros and compass check—*first turn*
- ___ ___ ___ Flight Instrument Check
- ___ ___ ___ Runup ✓

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
- ___ ___ ___ Landing ✓
- ___ ___ ___ Review of Missed Approach Procedure
- ___ ___ ___ Intercepting the Glide Slope (if appropriate)

FLYING THE FINAL APPROACH SEGMENT

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

INSTRUMENT LESSON 9
AATD or ACFT—FLYING DME ARCS
(CONTINUED)

FLYING THE MISSED APPROACH PROCEDURE

POSTFLIGHT

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

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

COMMENTS

Hours

--	--	--

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
- ___ ___ ___ G1000:
- ___ ___ ___ ADC Failure/AHRS Failure
- ___ ___ ___ GPS and WAAS Failure
- ___ ___ ___ Electrical Power Supply Malfunctions
- ___ ___ ___ Autopilot/Trim failures
- ___ ___ ___ GPS Terms:
- ___ ___ ___ RAIM
- ___ ___ ___ WAAS
- ___ ___ ___ LPV/DA
- ___ ___ ___ LNAV/VNAV/DA
- ___ ___ ___ LNAV/MDA

WEATHER

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

COMPLETION STANDARDS

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

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

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

Hours

INSTRUMENT LESSON 11

AATD or ACFT—REVIEW FOR THE STAGE ONE CHECK

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

TIME: Approx 3.0 hours

PREFLIGHT BRIEFING

- ____ Briefing on the Lesson
____ Documents and required instrument checks
____ Wake turb, wind shear, collision avoidance
____ Incursion avoidance—call all hold short lines
____ Weather
____ FAR AIM, enroute charts, approach plates, sectionals, WACs

TAKEOFF / CLIMB

- ____ Takeoff ✓
____ Takeoff clearance—copy, confirm, comply
____ Takeoff—normal
____ Climb 500' then "on course"
____ Climb ✓
____ Tower handoff / Center Check-in

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

BASIC INSTRUMENT FLIGHT

- ____ S + L flight at various airspeeds
____ Constant rate / speed climbs and descents
____ Standard and 1/2 rate turns
____ Steep turns
____ Slow flight (various configurations)
____ Stalls (power on / off)
____ Recovery from unusual altitudes
____ Partial panel—all exercises above

STARTUP

- ____ Engine Start ✓
____ Comm radio setup—freq, vol, transmitter
____ Nav radio setup—freq, ID, set course
____ ATIS—copy and review
____ IFR clearance—copy, confirm, comply

INTERCEPTING / TRACKING (VOR and RNAV/GPS)

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

TAXI AND RUNUP

- ____ Taxi ✓
____ Taxi Clearance—copy, confirm, comply
____ Taxi—wind, brakes, steering, speed, hazards
____ Gyros and compass check—first turn
____ Flight Instrument Check
____ Runup ✓

HOLDING—STANDARD / NON-STANDARD

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

INSTRUMENT LESSON 11
AATD or ACFT—REVIEW FOR THE STAGE ONE CHECK
(CONTINUED)

APPROACHES

- ___ ___ ___ DME ARC
- ___ ___ ___ ILS
- ___ ___ ___ NDB (optional)
- ___ ___ ___ VOR
- ___ ___ ___ Localizer
- ___ ___ ___ Localizer Back Course
- ___ ___ ___ GPS

LANDINGS

- ___ ___ ___ Identifying DA / MDA
- ___ ___ ___ Transitioning to visual landing...
or
- ___ ___ ___ Flying a missed approach
procedure
- ___ ___ ___ From a missed approach
- ___ ___ ___ 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	AATD	Total Inst	Instructor	Student	Date	Aircraft Type	Tail Number
Previous									
This Lesson									
Total									

COMMENTS

Hours

INSTRUMENT LESSON 12

AATD or ACFT—STAGE ONE CHECK

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

TIME: As required

PREFLIGHT BRIEFING

- ___ ___ ___ Briefing on the Lesson
___ ___ ___ Documents and required instrument checks
___ ___ ___ Wake turb, wind shear, collision avoidance
___ ___ ___ Incursion avoidance—call all hold short lines
___ ___ ___ Weather
___ ___ ___ FAR AIM, enroute charts, approach plates

PREFLIGHT PREPARATION

- ___ ___ ___ IFR cockpit ✓—ARROW
___ ___ ___ Tests—VOR, Transponder, Altimeter/Static System, ELT, 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—copy and review
___ ___ ___ IFR clearance—copy, confirm, comply

TAXI AND RUNUP

- ___ ___ ___ Taxi ✓
___ ___ ___ Taxi Clearance—copy, confirm, comply
___ ___ ___ Taxi—wind, brakes, steering, speed, hazards
___ ___ ___ Gyros and compass check—first turn
___ ___ ___ Flight Instrument Check
___ ___ ___ Runup ✓

TAKEOFF / CLIMB

- ___ ___ ___ Takeoff ✓
___ ___ ___ Takeoff clearance—copy, confirm, comply
___ ___ ___ Takeoff—normal
___ ___ ___ Climb 500' then "on course"
___ ___ ___ Climb ✓

BASIC INSTRUMENT FLIGHT

At least 2 below AI and HI covered

- ___ ___ ___ S + L flight at various airspeeds
___ ___ ___ Constant rate / speed climbs and descents
___ ___ ___ Standard and 1/2 rate turns
___ ___ ___ Steep turns (full panel)
___ ___ ___ Slow flight (various configurations)
___ ___ ___ Stalls (power on / off)-recovery at first indication
___ ___ ___ Recovery from unusual altitudes (AI covered)

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
___ ___ ___ GPS
___ ___ ___ ILS or LPV
___ ___ ___ NDB (optional)
___ ___ ___ VOR (optional)
___ ___ ___ Localizer (optional)
___ ___ ___ Localizer Back Course (optional)

INSTRUMENT LESSON 12
AATD or ACFT—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	AATD	Total Inst	Instructor	Student	Date	Aircraft Type	Tail Number
Previous									
This Lesson									
Total									

CRITIQUE

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 Instructor _____ Student _____ Date _____

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

Check Instructor _____ Student _____ Date _____

INSTRUMENT RATING COURSE

STAGE TWO

Cross Country Flight Training

Lessons 13-16

15.0 hours (approx) of dual instrument flight training in an airplane to include:

10.0 hours (approx) of instrument cross-country training to include:

1. At least one instrument cross-country flight of at least 250 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.

Stage two Objectives

*The student will be instructed in cross-country instrument flying,
and will review all instrument procedures in preparation
for the Instrument Rating Check*

Stage Two Completion Standards

*This stage will be complete when the student meets all lesson standards and performs all
maneuvers to Airman Certification 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)
- ___ ___ ___ TWEB (route forecasts)
- ___ ___ ___ WAs, WSs, 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—*copy, confirm, comply*
- ___ ___ ___ Taxi clearance—*copy, confirm, comply*
- ___ ___ ___ IFR Clearance (controlled and uncontrolled airports)

TAXI AND RUNUP

- ___ ___ ___ Taxi ✓
- ___ ___ ___ Gyro-compass check on first turn
- ___ ___ ___ 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—*copy, confirm, comply*

IFR EMERGENCY OPERATIONS

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

ENROUTE

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

APPROACH

___ ___ ___ ATC clearance—*copy, confirm, comply*
 ___ ___ ___ 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

INSTRUMENT LESSON 14

ACFT—IFR CROSS-COUNTRY FLIGHT PROCEDURES

OBJECTIVE: Instructor guided, student flight experiences in IFR cross-country flight procedures. One flight must be at least 250 nm long and include 3 different instrument approaches and one leg of at least 100 nm.

TIME: Approx 10.0 hours

PREFLIGHT BRIEFING

- ____ Briefing on the lesson
____ Documents and required instrument checks
____ Wake turb, wind shear, collision avoidance
____ INCURSION avoidance - call HOLD SHORT
____ Weather briefing (reports, forecasts, charts)
____ FAR AIM, enroute charts, approach plates, sectionals
____ Flight equipment—kneeboard, pencils, etc.

TAXI AND RUNUP

- ____ Taxi ✓
____ Taxi Clearance—copy, confirm, comply
____ Taxi—wind, brakes, steering, speed, hazards
____ Gyros and compass check—first turn
____ Flight Instrument Check
____ Runup ✓

PREFLIGHT PREPARATION

- ____ Completing / filing flight plan
____ IFR cockpit ✓—ARROW
____ Tests—VOR, Transponder, Altimeter/ Static, GPS database expiration
____ IFR Preflight Inspection ✓
____ IFR cockpit organization

TAKEOFF / CLIMB

- ____ Takeoff ✓
____ Takeoff clearance—copy, confirm, comply
____ Takeoff—type optional
____ Climb 500' then "on course"
____ Climb ✓
____ Tower handoff / Center Check-in
____ Center Clearance—copy, confirm, comply

STARTUP

- ____ Engine Start ✓
____ Comm radio setup—freq, vol, transmitter
____ Nav radio setup#1— freq, ID, set course
____ Nav radio setup #2—emergency return and review approach
____ ATIS—copy and review
____ IFR clearance—copy, confirm, comply

IFR EMERGENCY OPERATIONS

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

Hours

INSTRUMENT LESSON 14

ACFT—IFR CROSS-COUNTRY FLIGHT PROCEDURES

OBJECTIVE: Instructor guided, student flight experiences in IFR cross-country flight procedures. One flight must be at least 250 nm long and include 3 different instrument approaches and one leg of at least 100 nm.

TIME: Approx 10.0 hours

ENROUTE

___ ___ ___ Intercepting and tracking courses

___ ___ ___ Level-off from climb procedure

___ ___ ___ Maintaining course and altitude

___ ___ ___ Use of VORs/Victor Airways

___ ___ ___ Use of GPS

___ ___ ___ Autopilot use (all phases)

___ ___ ___ 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

___ ___ ___ Coupled approach with auto pilot

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—copy, confirm, comply

___ ___ ___ Proceeds per ATC instructions

POSTFLIGHT

___ ___ ___ Debrief

___ ___ ___ Update TCO and logbook

INSTRUMENT LESSON 14
ACFT—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	AATD	Total Inst	Instructor	Student	Date	Aircraft Type	Tail Number
Previous									
This Lesson									
Total									

COMMENTS

Hours

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
- ___ ___ ___ WST/WS/WA/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:

- ___ ___ ___ En Route 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/Act./Closing)
- ___ ___ ___ Oxygen Requirements
- ___ ___ ___ IFR Altitudes
- ___ ___ ___ Airspace, Cloud Clearance, & Vis.
- ___ ___ ___ Risk Elements

AIRCRAFT SYSTEMS RELATED TO IFR OPS.

- ___ ___ ___ Anti- & De-Icing Systems
- ___ ___ ___ Fuselage
- ___ ___ ___ Wing
- ___ ___ ___ Tailplane
- ___ ___ ___ Propeller
- ___ ___ ___ 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 & FMS
- ___ ___ ___ WAAS and RAIM
- ___ ___ ___ Autopilot/Flight Director Limitations
- ___ ___ ___ 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, En Route, 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
 ___ ___ ___ Autopilot Methods
 ___ ___ ___ 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
 ___ ___ ___ CDI vs. HSI
 ___ ___ ___ Bearing Pointer System (RMI)
 ___ ___ ___ Nav System Failures
 ___ ___ ___ DME Arcs:
 ___ ___ ___ “Turn 10, Twist 10”
 ___ ___ ___ Bearing Pointer
 ___ ___ ___ Published Arcs with FMS
 ___ ___ ___ 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

LANDING FROM AN INSTRUMENT APPROACH

- ___ ___ ___ Procedures and Limitations
- ___ ___ ___ Stabilized Approach
- ___ ___ ___ Continuing from DA/MDA
- ___ ___ ___ Approach Lighting Systems
- ___ ___ ___ LAHSO
- ___ ___ ___ Risk Elements

MISSED APPROACH

- ___ ___ ___ Procedures and Limitations
- ___ ___ ___ Identifying MAP
- ___ ___ ___ MAP and FMS
- ___ ___ ___ GA Button (C172S)
- ___ ___ ___ Autopilot , FD, and Missed Approach
- ___ ___ ___ Risk Elements

POSTFLIGHT

- ___ ___ ___ Aircraft Securing
- ___ ___ ___ Documenting Malfunctions
- ___ ___ ___ Accident/Incident Reporting
- ___ ___ ___ Risk Elements

CIRCLING APPROACH

- ___ ___ ___ Procedures and Limitations
- ___ ___ ___ Approach Category and Airspeed
- ___ ___ ___ Expanded Circling Radii
- ___ ___ ___ Missed Approach Procedure
- ___ ___ ___ 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

Hours		

ACFT—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

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, propeller/intake, fuel, pitot-static, vacuum pump)
- ___ ___ ___ 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
- ___ ___ ___ Timed turns to magnetic compass headings—partial & full panel
- ___ ___ ___ Unusual attitudes—partial & full panel
- ___ ___ ___ Use of autopilot
- ___ ___ ___ Risk Elements

INTERCEPTING AND TRACKING, DME ARCS

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

HOLDING—STANDARD / 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)
- ___ ___ ___ Coupled approach
- ___ ___ ___ Missed approach
- ___ ___ ___ Circling approach
- ___ ___ ___ Landing from straight-in / circling approach
- ___ ___ ___ Risk Elements

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

IFR EMERGENCY OPERATIONS

___ ___ ___ Takeoff, En Route, Approach
 ___ ___ ___ Communications Failure
 ___ ___ ___ Electrical Failure
 ___ ___ ___ Pitot / Static System Failure
 ___ ___ ___ Vacuum Pump Failure
 ___ ___ ___ GPS Failure
 ___ ___ ___ AHRS/ADC Failure
 ___ ___ ___ Risk Elements

POSTFLIGHT PROCEDURES

___ ___ ___ Checking instruments and equip-
 ment
 ___ ___ ___ 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 A.C.S.

	Flight	Inst	AATD	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 ACS 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

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 (both nose high & nose low)

V. NAVIGATION SYSTEMS

- ___ ___ ___ Intercepting & tracking Nav systems and DME arcs
- ___ ___ ___ Departure, En Route, 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-8081-8, or latest Instrument Rating Airman Certification 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 #

**INSTRUMENT RATING END-OF-COURSE EVALUATION
(CONTINUED)**

CRITIQUE

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 " 3 ".
 - B. Insert the Review Lesson sheets following this page.
 - C. Return to the Chief / Assistant Chief Instructor for reevaluation.

Check Instructor - Student _____ Date _____

- 2 _ _ This stage check was performed in a satisfactory manner.

Check Instructor - Student _____ Date _____

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

Ground Training Course

Hours

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

Objectives

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

INSTRUMENT RATING

Ground Training Course

STAGE 1

Lessons 1-6

14.0 hours (minimum) of ground training

Stage 1 Objectives

The student will be introduced to the principles of instrument flight , limitations of flight instruments and navigations receivers / systems, and the proper operation of flight instruments and navigation 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.

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

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

- 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

- 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. The instructor will review incorrect responses to ensure student understanding.

ASSIGNED READING

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

LESSON 2
BASIC INSTRUMENT FLIGHT

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

- Gyroscope
- Magnetic compass
- Pitot-static

FUNDAMENTAL SKILLS

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

FLIGHT MANEUVERS

- 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

- 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. The instructor will review incorrect responses to ensure student understanding.

ASSIGNED READING

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

**LESSON 3
INSTRUMENT NAVIGATION**

OBJECTIVES

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

VOR NAVIGATION

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

ADF NAVIGATION

- RMI
- Intercepting / tracking a bearing
- Time and distance to a station
- Station passage
- Limitations

RNAV

- VORTAC based
- INS
- LORAN
- GPS

LESSON COMPLETION STANDARDS

The student will demonstrate understanding during oral or written quizzes by the instructor at the completion of the lesson. The instructor will review incorrect responses to ensure student understanding.

ASSIGNED READING

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

**LESSON 4
FAR / AIM WORKSHOP**

OBJECTIVES

- Acquire knowledge of NTSB regulations and FARs as they pertain to instrument flight.
- Gain greater understanding of the National Airspace System and the instrument environment in which pilots operate.

RULES AND REGULATIONS

- FAR Part 1
- FAR Part 66
- FAR Part 91
- FAR Part 141
- NTSB Part 830

ENVIRONMENT

- 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. The instructor will review incorrect responses to ensure student understanding.

ASSIGNED READING

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

LESSON 5
ATC

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

- 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. The instructor will review incorrect responses to ensure student understanding.

ASSIGNED READING

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

LESSON 6
STAGE 1 EXAMINATION

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%. The instructor will review each incorrect response with the student to ensure understanding before the student progresses to the next stage.

ASSIGNED READING

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

INSTRUMENT RATING

Ground Training Course

STAGE 2

Lessons 7-10

12.0 hours (minimum) of ground training

Stage 2 Objectives

The student will learn the procedures used when flying IFR approaches. In addition, they will learn to transition to the enroute structure via departure and arrive 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**

OBJECTIVES

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

CHARTS

- 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. The instructor will review incorrect responses to ensure student understanding.

ASSIGNED READING

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

**LESSON 8
ENROUTE PROCEDURES**

OBJECTIVES

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

IFR CHARTS

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

HOLDING

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

PROCEDURES

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

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

LESSON 9
APPROACHES

OBJECTIVES

- Understand the procedures and methods to transition to an approach.
- Understand charting symbols.
- Gain an understanding of VOR and NDB approaches.
- Gain an understanding of ILS components and approach procedures.
- 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

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

- VOR
- NDB
- ILS
- LDA
- SDF
- MLS
- RNAV / GPS

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

LESSON 10
STAGE 2 EXAMINATION

OBJECTIVES

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

EXAMINATION

- Departures
- Enroute procedures
- Approaches

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

INSTRUMENT RATING

Ground Training Course

STAGE 3

Lessons 11-15

6.0 hours (minimum) of ground training

Stage 3 Objectives

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.

Stage 3 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. 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

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
- Icing and cold weather operations
- Hydroplaning
- Low visibility
- Volcanic ash

LESSON COMPLETION STANDARDS

The student will demonstrate understanding during oral or written quizzes by the instructor at the completion of the lesson. The instructor will review incorrect responses to ensure student understanding.

ASSIGNED READING

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

LESSON 12
WEATHER PRODUCTS AND SOURCES

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
- DUATS
- Private industry
- Airmets and Sigmet
- Convective Sigmet
- 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

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

LESSON 13
IFR EMERGENCIES

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
- Situational awareness

LESSON COMPLETION STANDARDS

The student will demonstrate understanding during oral or written quizzes by the instructor at the completion of the lesson. The instructor will review incorrect responses to ensure student understanding.

ASSIGNED READING

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

LESSON 14
IFR FLIGHT PLANNING

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

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

LESSON 15
STAGE 3 EXAMINATION

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

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 complete understanding before the student progresses to the End-of-Course Examination.

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 must complete a practice Instrument Rating End-of-Course Examination with a minimum score of 80%.