TRAINING COURSE OUTLINE

Bridgewater State University holds Pilot School Certificate No. **LY8S311Q**

Bridgewater State University is an accredited four-year degree granting institution within the state of Massachusetts higher educational system. The base of operations/business address is 111 Harrington Hall, Bridgewater, MA 02325.

INSTRUMENT RATING COURSE - AIRPLANE

The Facilities Manual is Part 1 of the Training Course Outline and meets the requirements of 14 CFR Part 141.55 (c), subsections 1-5.
Ground and Flight Course Manuals are contained in Part 2 and meet the requirements of the Training Course Outline specified in 14 CFR 141.55 (c) 6-8.

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RECORD OF REVISIONS

REV. #	DATE	CONTENT	INITIAL
I	2/18/09	Updates facility briefing room locations, facility diagram, and adds Asst. Chief Instructor (Ground and Flight).	
II	7/2/09	Replaces all references to QMA-11E aircraft and replaces with Cessna 172. Removes all Jeppesen training publications as required references, replaces with FAA publications. Increases level of performance on Stage I and II flight lessons to meet PTS. Increases level of performance on Stage III flight lessons to exceed PTS. Clarifies requirement for number of stall maneuvers on various lessons. Adds tasks non-precision approach, and non-precision approach (partial panel) on flight lesson #29.	
III	11/23/09	Clarifies Imminent and Full stall requirements on stage I lessons, adds ATC Clearances and Procedures, and Compliance with Departure, Enroute and Arrival Procedures and Clearances in stages II and III lessons.	
IV	12/10/10	Updates flight school name change flight lesson objectives/tasks/ completion standards to enhance development of ADM/SRM skills, removes redundant tasks, removes various tasks associated with outdated or uninstalled navigation equipment (e.g. ADF).	
V	1/17	Update of various ground and flight lesson objectives, tasks and completion standards to comply with Airman Certification Standards. Various grammatic and format corrections.	
VI	1/12/18	Change of Chief Instructor/Assistant Chief Instructor(s), addition of Redbird AATD.	
VII	10/18/19	Updates classroom diagrams, approved AATDs, facility diagrams, addition of Cockpit Procedures Trainers, ground course enrollment requirement, grammar and format.	
VIII	9/17/20	Updates airport diagrams, availability of Technically Advanced Airplanes (TAA), change of Chief Instructor.	
IX	6/21/21	Change of chief and Assistant Chief Instructors, addition of distance learning capability, adds satellite location, corrected list of affected pages, minor grammar corrections.	

NOTE

The manual holder is responsible for maintaining current revisions.

LIST OF AFFECTED PAGES

PAGE #	REVISION	DATE	PAGE #	REVISION	DATE
1	REV VIII	9/17/20	2	REV VIII	9/17/20
3	REV IX	6/21/21	4	REV IX	6/21/21
5	REV V	1/17	6	REV V	1/17
7	REV IX	6/21/21	8	REV IX	6/21/21
9	REV VII	10/18/19	10	REV VIII	9/17/20
11	REV VIII	9/17/20	12	REV VII	10/18/19
13	REV VIII	9/17/20	14	REV V	1/17
15	REV V	1/17	16	REV IX	6/21/21
17	REV VII	10/18/19	18	REV V	1/17
19	REV V	1/17	20	REV V	1/17
21	REV V	1/17	22	REV V	1/17
23	REV V	1/17	24	REV V	1/17
25	REV V	1/17	26	REV V	1/17
27	REV V	1/17	28	REV V	1/17
29	REV V	1/17	30	REV V	1/17
31	REV V	1/17	32	REV V	1/17
33	REV V	1/17	34	REV V	1/17
35	REV V	1/17	36	REV V	1/17
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43	REV V	1/17	44	REV V	1/17
45	REV V	1/17	46	REV V	1/17
47	REV V	1/17	48	REV V	1/17
49	REV V	1/17	50	REV V	1/17
51	REV V	1/17	52	REV V	1/17
53	REV V	1/17	54	REV V	1/17
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57	REV V	1/17	58	REV V	1/17
59	REV V	1/17	60	REV V	1/17

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63	REV V	1/17	64	REV V	1/17
65	REV V	1/17	66	REV V	1/17
67	REV V	1/17	68	REV V	1/17
69	REV V	1/17	70	REV V	1/17
71	REV V	1/17	72	REV V	1/17
73	REV V	1/17	74	REV V	1/17
75	REV V	1/17	76	REV V	1/17
77	REV V	1/17	78	REV V	1/17
79	REV V	1/17	80	REV V	1/17
81	REV V	1/17	82	REV V	1/17
83	REV V	1/17	84	REV V	1/17
85	REV V	1/17	86	REV V	1/17
87	REV V	1/17	88	REV V	1/17
89	REV V	1/17	90	REV V	1/17
91	REV V	1/17	92	REV V	1/17

INSTRUMENT RATING COURSE - AIRPLANE

PART I

FACILITIES MANUAL

The Facilities Manual is Part 1 of the Training Course Outline and meets the requirements of 14 CFR Part 141.55 (c), subsections 1-5.

PART I
FACILITIES MANUAL

Table of Contents

Bridgewater State University Facility

The Bridgewater State University campus located in Bridgewater, Massachusetts, serves as the primary business address and administrative office for this course.

Satellite Location

The Bridgewater State University campus located in Bridgewater, Massachusetts, serves as the satellite location for conduct of the ground training portion of this course.

Academics

The academic facilities are located on the campus of Bridgewater State University, Harrington Hall, 95 Grove Street, Bridgewater, Massachusetts. Bridgewater State University may elect to conduct the academic ground courses for students at its' flight training facility, located at New Bedford Regional Airport, New Bedford, Massachusetts.

Distance learning

Bridgewater State University may deliver ground training in accordance with 14 CFR 141.53(d) utilizing internet-based tools described below.

- All courses are delivered using the Blackboard learning management system that requires a unique login to ensure identification/authorization, confidentiality, and access control. Blackboard allows out-of-class communications, attendance tracking, in-class discussion, participation, questions and answers, assignment feedback, and assessment feedback.
- Access to Blackboard is available through (4) different internet browsers.
- Blackboard monitors attendance for record-keeping compliance. Participants will be noted in their paper records to differentiate participants in the distance learning platform.
- A secure internet proctoring resource (Respondus Lockdown Browser) ensures integrity of state exams, end-of-course and final exams.
- The Principle Operations Inspector (POI) receives a blackboard account to allow for remote access to each course in accordance with 14 CFR 141.53(d)(2).

Classrooms

Academic classes will typically be conducted in Harrington Hall in two (2) classrooms located on the ground floor of the building. Classroom 001 measures 24' by 20' and can accommodate 24 students. Classroom 002 measures 35' by 20' and can accommodate 30 students. Both classrooms contain computerized projection equipment and dry erase boards. Other rooms may be available and assigned by the University as necessary.

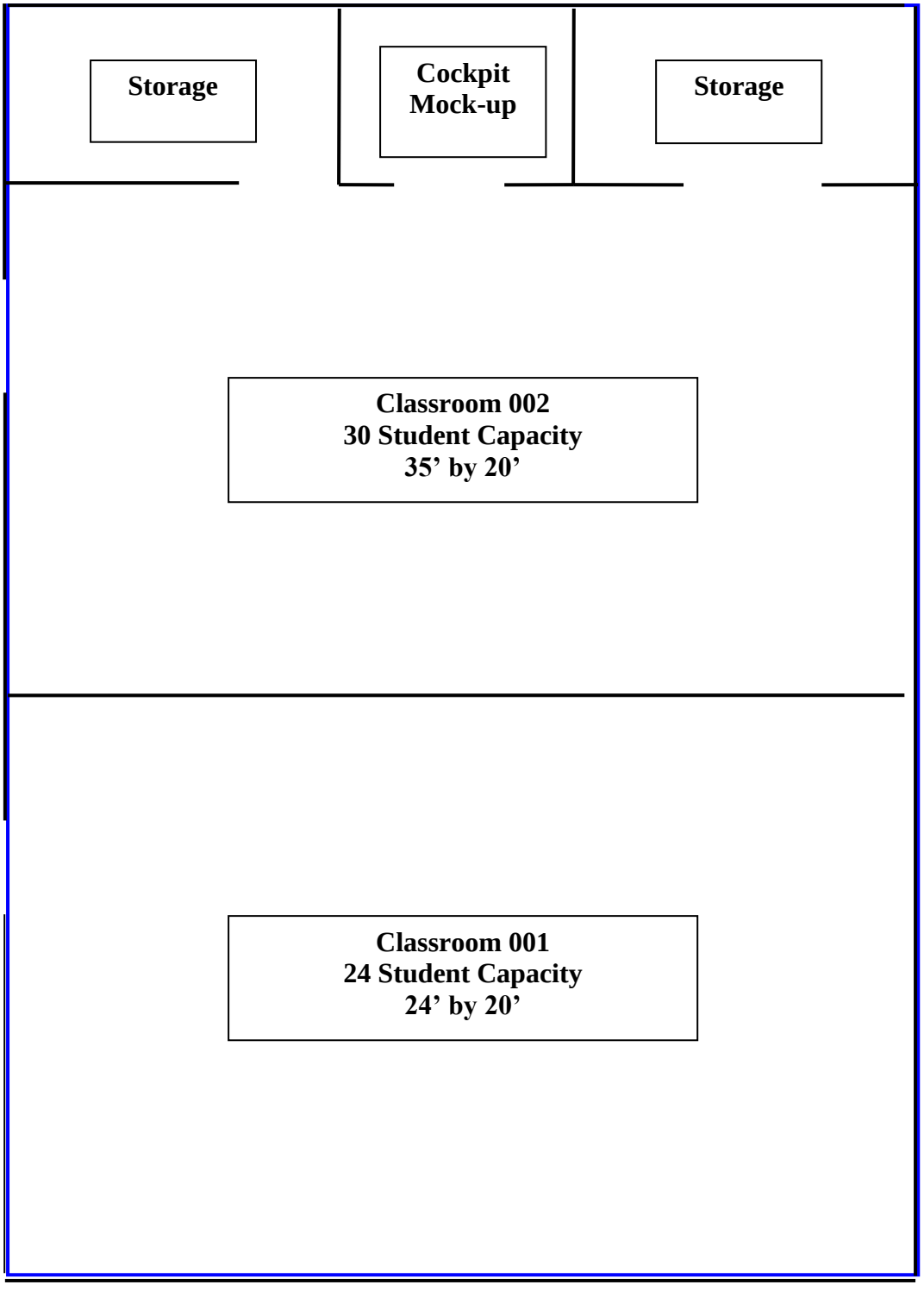
CPTs

Bridgewater State University's flight training program may utilize C-172R Cockpit Procedures Trainers (CPTs) for this course of training.

Ground Training Aids

- Overhead projector with Audio/Visual capability
- Computer terminal including internet access
- Video projector with DVD capability
- Ceiling-mounted video projector unit
- Wall-mounted dry-erase board

Bridgewater State University Classroom Diagram



New Bedford (KEWB) Flight Training Center

Bridgewater State University's Flight Training Center, located at the New Bedford Regional Airport at 1852 Shawmut Avenue, North Dartmouth, MA 02747, is the central location for all flight training activity.

Aircraft

Bridgewater State University's flight training program may utilize two (2) aircraft for this course of training:

The Piper PA-28R Arrow is a four-place, single-engine, complex aircraft with dual flight controls. The aircraft is rated in the Normal category and certified for Day/Night VFR/IFR Operations. The aircraft meets the requirements of 14 CFR Part 141.39 and 141.75.

The Cessna 172 is a four-place, single-engine, non-complex aircraft with dual flight controls. The aircraft is rated in the Normal and utility categories and is certified for Day/Night VFR/IFR Operations. The aircraft meets the requirements of 14 CFR Part 141.39 and 141.75. Two (2) of the Cessna 172 aircraft qualify as Technically Advanced Airplanes per the requirements of 14 CFR Part 61.1 and 61.129(j).

Special equipment required for the course includes a VOR receiver, LOC and GS receivers, Transponder with Mode C, and GPS.

AATDs

Bridgewater State University's flight training program may utilize three (3) advanced aviation training devices for this course of training:

1) Redbird Models LD (2), FMX (1).

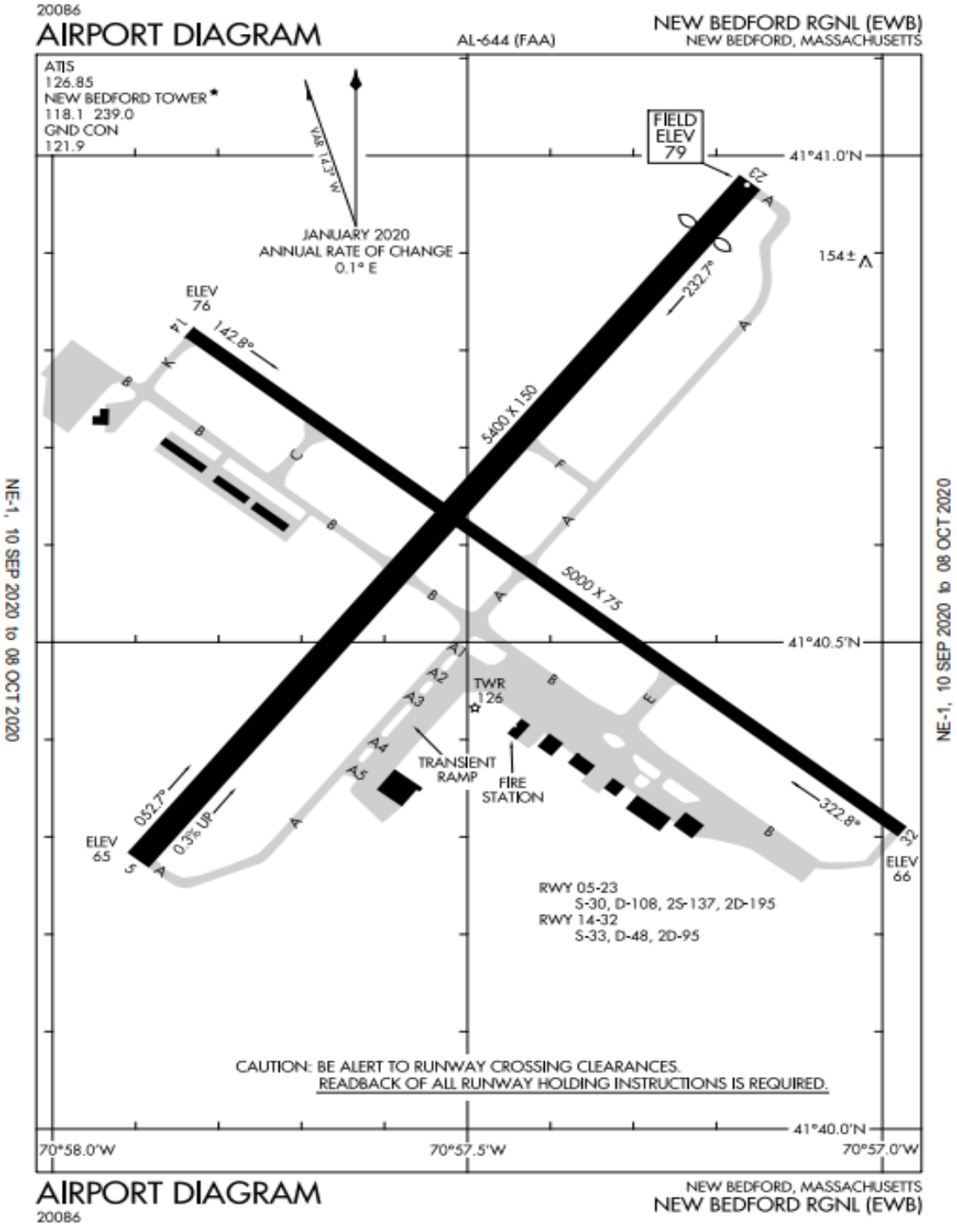
New Bedford Regional Airport

The New Bedford Regional Airport (KEWB) is the main flight training center for the Bridgewater State University aviation program. KEWB contains two (2) hard-surfaced runways and meets the requirements of 14 CFR Part 141.38 for both day and night flight operations. KEWB has an operational control tower that is staffed from 0700 – 2200 local time. The airport has operable ILS, LOC, LOC/BC, and GPS approaches. Maintenance service is available from 0700 – 1700 and on call during evening and night flight operations. Fuel service is available 0700 – 2000 daily, on call at other times.

Training Airports

All airports used for training operations meet the requirements of 14 CFR Part 141.38. Guidance for use of these airports is provided for flight instructors and students via the Approved Airports listing in the Bridgewater State University Aviation Operations Manual. The Chief Flight Instructor or his/her designee may approve the use of any public-use airport listed in the current Chart Supplement.

New Bedford Regional (KEWB) Airport Diagram



Flight Briefing Area

The main flight briefing area is centrally located within the operations building and measures 22' by 33'. It is equipped with briefing tables, chairs, cubicles (equipped with dry erase boards), a computer-based weather information station that provides textual and graphic weather reports and forecasts, and a landline phone connecting to a FSS Briefer. The room can accommodate up to 30 persons. Additionally, four briefing cubicles and a student study area are located in the Central Bay.

Classroom Area

The classroom area is located at the southeast corner of the facility, and is accessible from either the main facility entrance or from the rear of the classroom on the rearward side of the building. The classroom measures 23' by 34' and accommodates up to 30 persons. The room is equipped with tables, chairs, ceiling-mounted video projector, computer terminal with internet access, and dry erase boards.

AATD Room

One room measuring 32' by 22' houses three AATD units and a crosswind trainer.

Administrative Offices

The facility contains multiple administrative offices. Measuring 9' by 11', 9' by '14', 12' by 18', 14' by 24' or 18' by 24', each can accommodate (5) to (10) persons, respectively.

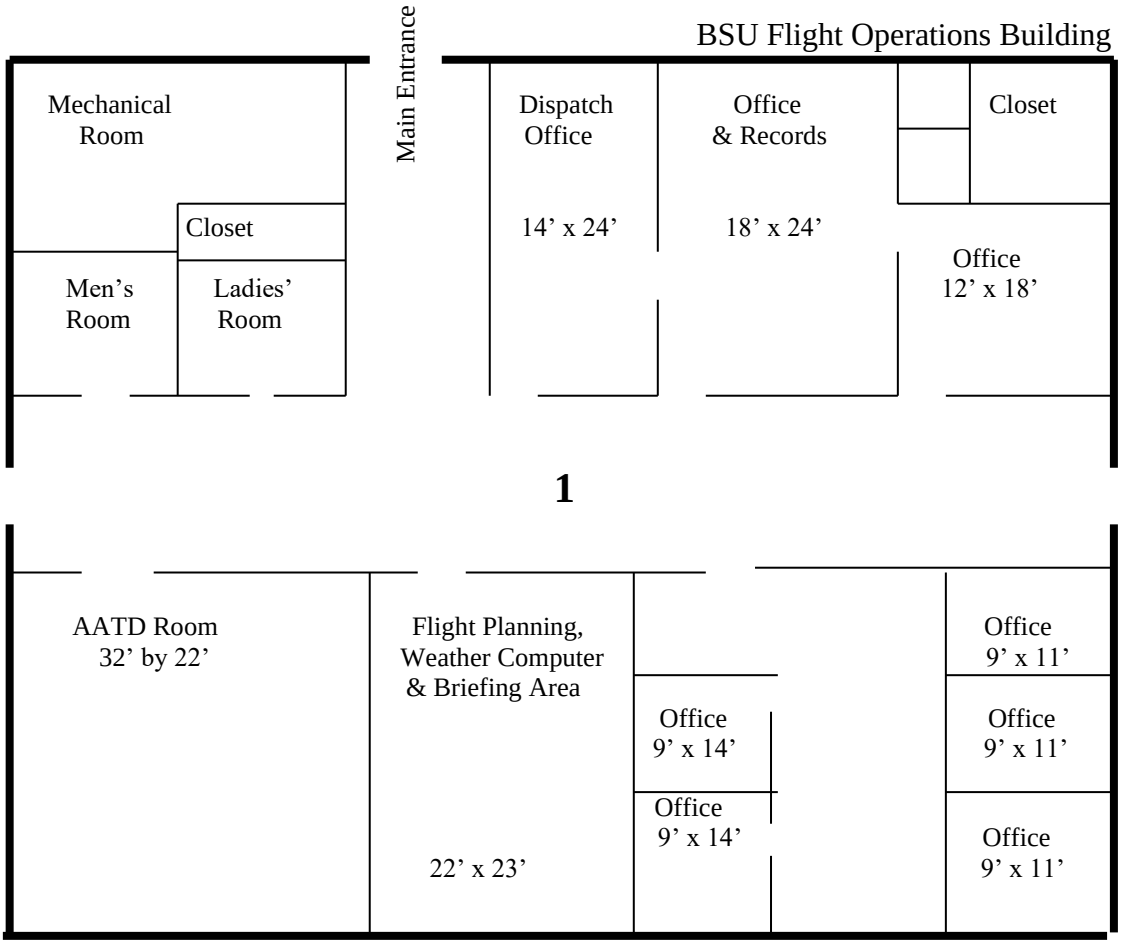
Ground Training Aids

- Overhead projector with audio/visual capability
- Computer terminal including internet access
- Video projector with DVD capability
- Ceiling-mounted video projector unit
- Wall-mounted dry-erase board
- Aeronautical charts, publications, and aircraft components for training purposes only
- Resource library
- C172R Cockpit Procedures Trainers (CPT)

NOTE

All classrooms and administrative areas comply with current local building, health and sanitation codes. All rooms are enclosed and easily accessible, and provide a clean instructional and operational environment free from outside distractions.

Flight Training Center Diagram



Not to Scale

Ground School Classroom
23' x 34' **2**

Central Bay Briefing Area
3

LOCATION KEY

2	**3**	**1**

PART II

COURSE MANUAL

INSTRUMENT RATING COURSE - AIRPLANE

INSTRUMENT TRAINING COURSE SYLLABUS

Table of Contents

PERSONNEL

CHIEF FLIGHT INSTRUCTOR

The Chief Instructor for this course is Timothy Townsend. The Chief Flight Instructor meets the requirements of 14 CFR 141.35(e) and is designated by letter.

CHIEF GROUND INSTRUCTOR

The Chief Ground Instructor for this course is Timothy Townsend. The Chief Ground Instructor meets the requirements of 14 CFR 141.35(e) and is designated by letter. Whenever a Chief or Assistant Chief Ground Instructor is either undesignated or unavailable, the Chief or assistant Chief Flight Instructor will assume these duties.

ASSISTANT CHIEF FLIGHT INSTRUCTOR

The Assistant Chief Flight Instructor for this course is Loren Herren. The Assistant Chief Flight Instructor meets the requirements of 14 CFR 141.36(e) and is designated in the Part 141 Operations Specifications.

ASSISTANT CHIEF GROUND INSTRUCTOR

The Assistant Chief Ground Instructor for this course is Loren Herren. The Assistant Chief Ground Instructor meets the requirements of 14 CFR 141.36(e) and is designated in the Part 141 Operations Specifications.

GROUND INSTRUCTORS

Each Ground Instructor assigned to this course must possess a valid Ground Instructor Certificate or a valid Flight Instructor Certificate with an Airplane rating. Other individuals may give instruction in this course if the Chief Flight Instructor (or if the Chief Flight Instructor is unavailable, the Assistant Chief Ground Instructor) finds that individual qualified to provide instruction. The instruction will be provided under the direct supervision of the Chief or Assistant Chief Instructor who is present at the facility when such instruction is given.

FLIGHT INSTRUCTORS

Each Flight Instructor assigned to this course must hold a Flight Instructor certificate with an Instrument-Airplane rating. Each CFI-I approved for training in this course will meet the requirements of 141.79 and be designated in the Part 141 Operations Specifications.

STUDENT INFORMATION

COURSE ENROLLMENT

To be eligible for enrollment in the ground or flight portion of this course, students must be enrolled and in good academic standing at Bridgewater State University. To be enrolled in the flight course, students must hold an FAA Private Pilot certificate and current FAA Third Class Medical Certificate.

COMPLETION STANDARD FOR GRADUATION

To be eligible for graduation from this course, students must be able to read, speak, write, and understand the English language, and satisfactorily complete the ground and flight training outlined in this syllabus. Students will demonstrate through oral and written exams and flight tests the knowledge and skill needed to pass the FAA Instrument Rating Airman Knowledge Test and Practical Test.

LESSON DESCRIPTION AND STAGES OF TRAINING

The Bridgewater State University Instrument Rating Course (ground) contains three (3) stages and a total of 28 lessons. The Flight portion of the course contains three (3) stages and 32 total lessons. Each lesson is fully described within the syllabus and includes objectives, completion standards, and measurable units of accomplishment. Stage objectives and completion standards are provided at the beginning of each stage within the syllabus.

TESTS AND CHECKS

The syllabus incorporates stage checks and end-of-course tests in accordance with CFR Part 141, Appendix B. The Chief Flight Instructor is responsible for ensuring that each student accomplishes the required stage checks and end-of-course tests in accordance with Bridgewater State University's approved training course. However, the Chief Instructor may delegate authority for stage checks and end-of-course tests to the Assistant Chief or Check Instructor.

COURSE INTRODUCTION

The Bridgewater State University Instrument Rating Course coordinates academic study assignments and flight training required for pilots learning to operate in a complex aviation environment. New subject matter is introduced during the ground lessons in multimedia formats, including:

1. Current FAA Instrument Rating Airman Certification Standards (ACS)
2. NACO Instrument Approach Procedure Charts (IAPs)
3. NACO IFR Low En Route Charts
4. NACO Departure Procedures (DPs)
5. NACO Standard Terminal Arrivals (STARs)
6. Current FAA Chart Supplement
7. Current FAR/AIM
8. Current FAA Pilot's Handbook of Aeronautical Knowledge (PHAK)
9. Current FAA Airplane Flying Handbook
10. Current FAA Instrument Flying Handbook (IFH)
11. Current FAA Instrument Procedures Handbook
12. Aeronautical Decision Making (AC 60-22)
13. General Aviation Controlled Flight Into Terrain Awareness (AC 61-134)
14. Role of Preflight Preparation (AC 61-84)
15. Pilot's Role in Collision Avoidance (AC 90-48)
16. Guidelines for Using GPS Equipment for IFR Operations (AC 90-84)
17. Risk Management Handbook
18. Crew Resource Management Training (AC 120-51)
19. FAA AC 00-45H Aviation Weather
20. FAA AC 00-6B Aviation Weather Services
21. Appropriate Pilot's Operating Handbook (POH)
22. Appropriate BSU Flight Standards Manual (FSM)
23. IFR Plotter and Manual
24. Multimedia presentations
25. Instructor/student discussions
26. Stage and end-of-course exams

Whenever possible and practical, ground lessons are completed in ground school just prior to the respective flight lessons outlined in the syllabus. Bridgewater State University may elect to present all of the ground lessons before the student is introduced to the airplane. If a significant amount of time lapses between ground and flight lessons, instructors are expected to conduct review training of essential material to ensure that the student has retained and can apply the previous material. Flight lessons should not be conducted until the related ground lesson has been completed.

In accordance with established FAA practices, this syllabus utilizes the building-block theory of learning, where each item taught must be presented on the basis of previously learned knowledge and skills. It is designed to coordinate academic support materials with the flight lessons.

COURSE ELEMENTS

The Bridgewater State University Instrument Rating Course is designed to be conducted as a combined ground and flight training program, but it may be divided into separate components. This course includes the most current FAA pilot certification requirements. The syllabus and support materials provide necessary information and present the course in a logical manner.

GROUND TRAINING

In accordance with 14 CFR FAR Part 141, ground school training is an integral part of pilot certification courses. The Bridgewater State University ground training syllabus has been designed to meet this requirement in both letter and spirit. This course coordinates the sequence of ground and flight events to maximize effectiveness of the academic knowledge and its application during flight events.

Lessons shall be conducted in the numerical order as listed in the ground and flight training segments of the syllabus. Flexibility for adapting to individual student needs and training situations is occasionally required, but the syllabus lesson sequence may be altered only with the prior approval of the Chief or Assistant Chief Ground Instructor. Any deviation should not disturb the course continuity or objective. Each lesson may be presented in one session or divided into multiple sessions, as necessary.

USING THE GROUND LESSONS

The Bridgewater State University Instrument Rating Course Ground lessons are best utilized by using all of the individual elements together in an organized approach as described in the syllabus. The syllabus contains cross-references which direct the user to the appropriate study materials for each lesson. Instructors are reminded to review the study assignment for the next lesson with their students.

STAGE CHECKS

Stage exams evaluate the student's understanding of the knowledge areas within a stage of training. Students must successfully complete each stage exam before progressing to the next stage. The Chief Instructor is responsible for the conduct of each stage check, and may designate authority for conducting the stage check to an Assistant Chief or Check Instructor, as necessary. This procedure provides close supervision of training, provides another opinion on the student's progress, and gives the Chief Instructor an opportunity to evaluate training effectiveness. Minimum passing score for any written stage or final exam for the purpose of earning Part 141 credit toward the Instrument Rating certificate is 80%.

TEXTBOOKS/MULTI-MEDIA PRESENTATIONS

Prior to each ground lesson, students are expected to study the assigned textbook(s) sections or chapters. The texts are the primary source for initial study and review and contain concise explanations of the fundamental concepts and ideas and are organized in a logical building-block sequence. Study of the assigned materials prior to the scheduled lesson will improve student preparation and reduce overall training time.

INSTRUMENT RATING GROUND COURSE

COURSE OVERVIEW

COURSE OBJECTIVE
The student will obtain the knowledge, risk management and skills necessary to meet the requirements for an Instrument Rating certificate with an Airplane category rating.

COURSE COMPLETION STANDARDS
The student must demonstrate through knowledge tests, flight tests, and appropriate records that he/she meets the knowledge, risk management and skill requirements necessary to obtain an Instrument Rating certificate with an Airplane category rating.

TRAINING SYLLABUS
The Bridgewater State University Instrument Rating syllabus meets all curriculum requirements of 14 CFR 141, Appendix C.

TRAINING COURSE
The Ground Training course contains three (3) stages and a total of 26 lessons.

INSTRUMENT RATING GROUND COURSE SYLLABUS

GROUND TRAINING COURSE OBJECTIVES

The student will obtain and demonstrate knowledge and aeronautical decision-making at a level that meets or exceeds FAA Instrument Rating Airman Certification Standard and which is required to pass the FAA Instrument Rating-Airplane Airman Knowledge test.

LESSON GRADING AND COMPLETION STANDARD

Each ground lesson is graded across three (3) elements; Knowledge (defined by the applicant's ability to demonstrate understanding of the task elements), Risk Management (defined by the applicant's ability to identify, assess and mitigate risks associated with the task) and Skill (defined by the applicant's ability to apply the skill necessary to achieve the listed objective).

GROUND TRAINING COMPLETION STANDARDS

The student must demonstrate through written, oral and practical examination that s/he has obtained the knowledge (defined by the applicant's ability to demonstrate understanding of the task elements), risk management ability (defined by the applicant's ability to identify, assess and mitigate risks associated with the task) and skill (defined by the applicant's demonstrated ability to apply the skill necessary to achieve the listed objective).at a level that meets or exceeds FAA Instrument Rating - Airplane Airman Certification Standard and which is required to pass the FAA Instrument Rating-Airplane Airmen Knowledge test.

INSTRUMENT RATING GROUND COURSE
TIME ALLOCATION TABLE

STAGE I

LESSON	SUBJECT	HOURS	
		Training	**Exam**
I	Pilot Qualifications, Human Factors/Physiology	1.0	
II	Aircraft Flt Instrmts, Systems Related to IFR Ops	1.0	
III	Attitude Instrument Flying	1.0	
IV	Navigation Equipment	1.0	
V	FARs and Instrument Flying	1.0	
VI	Airports, Airspace, and Flight Information	1.0	
VII	Air Traffic Control System	1.0	
VIII	Air Traffic Control Clearances	1.0	
IX	Stage I Exam		1.0
Stage I Totals		8.0	1.0

STAGE II

LESSON	SUBJECT	HOURS	
		Training	**Exam**
X	Departure Procedures	1.0	
XI	En Route Procedures	1.0	
XII	Holding Procedures	1.0	
XIII	Arrival Procedures	1.0	
XIV	Instrument Approach Charts	1.0	
XV	Instrument Approach Procedures	1.0	
XVI	Non-Precision Approaches	1.0	
XVII	RNAV Approaches	1.0	
XVIII	Precision Approaches	1.0	
XIX	Stage II Exam		1.0
Stage II Totals		9.0	1.0

STAGE III

LESSON	SUBJECT	HOURS	
		Training	**Exam**
XX	Meteorology	2.0	
XXI	Weather Information I	3.0	
XXII	Weather Information II	1.0	
XXIII	Emergency Procedures	1.0	
XXIV	Flight Planning	1.0	
XXV	Stage III Exam		1.0
XXVI	Final Exam		2.0
Stage III Totals		8.0	3.0
Course Totals		25.0	5.0

STAGE I

STAGE OBJECTIVES

During this stage the student will obtain and demonstrate knowledge and risk management ability associated with instrument pilot qualifications, principles of instrument flight including the use, capabilities and limitations of flight instruments and navigation systems, use of IFR publications for flight planning and execution, the air traffic control system as it relates to IFR operations, and Federal Aviation Regulations pertinent to instrument flying.

STAGE COMPLETION STANDARDS

This stage is complete when the student has completed the Stage I written exam with a minimum score of 80%.

STAGE I
GROUND LESSON 1
PILOT QUALIFICATIONS, HUMAN FACTORS / PHYSIOLOGY

LESSON REFERENCES Instrument Flying Handbook Ch. 1; AIM Ch. 8; PHAK Chs. 16, 17, Risk Management Handbook, ADM (AC 60-22), CRM (AC 120-51), FAR Part 61

RECOMMENDED SEQUENCE

1. Lesson Introduction
2. Material Presentation and Discussion
3. Knowledge Review

LESSON OBJECTIVE

The student will be introduced to instrument pilot qualifications, and increase their understanding of human factors related to aviation in the IFR environment.

CONTENT

___ Instrument Rating Requirements
___ IFR Pilot Privileges and Limitations
___ Flight Experience and Logbook Requirements
___ Defining Risk Management
___ Human Behavior
___ Identifying Hazards and Mitigating Risk
___ Risk Assessment Methods
___ Aeronautical Decision Making Models
___ Single Pilot Resource Management

AVIATION PHYSIOLOGY

___ Fitness for Flight
___ Stress and Fatigue
___ Alcohol and Drug Effects
___ Spatial Disorientation
___ Vestibular Disorientation
___ Hypoxia and Hyperventilation

COMPLETION STANDARDS

Through in-class oral and/or written quizzing students will exhibit satisfactory knowledge, risk management, and skills associated with human factors, risk management and aeronautical decision making.

STUDY ASSIGNMENT

Instrument Flying Handbook Ch. 3; PHAK Ch. 7, Advanced Avionics Handbook, Ch. 1, 2.

STAGE I
GROUND LESSON 2
AIRCRAFT FLIGHT INSTRUMENTS, SYSTEMS RELATED TO IFR OPS

LESSON REFERENCES
Instrument Flying Handbook Ch. 3; PHAK Ch. 7, Advanced Avionics Hdbk Ch 1, 2

RECOMMENDED SEQUENCE
1. Lesson Introduction
2. Material Presentation and Discussion
3. Knowledge Review

LESSON OBJECTIVE
Students will gain an understanding of the principles and operational use of flight instruments and their systems, including limitations and common errors of each instrument.

CONTENT
Gyroscopic Instruments
___ Attitude Indicator
___ Heading Indicator
___ Turn Coordinator
___ Instrument Checks
___ System and Instrument Errors

Magnetic Compass
___ Principle of Operation
___ Compass Errors
___ Instrument Check

Pitot-Static Instruments
___ System Operation
___ Airspeed Indicator
___ Altimeter
___ Vertical Speed Indicator
___ System and Instrument Errors
___ Instrument Check

Electronic Flight Displays
___ System Operation
___ Primary Flight Display
___ Multi-Function Display
___ System Failures and Standby Instruments

Anti-Ice and De-Ice Systems
___ Operational Characteristics and Limitations
___ Considerations of Pilot and Equpmt for Flight into Known/Forecast Icing Conditions

COMPLETION STANDARDS
Through in-class oral and/or written quizzing students will exhibit satisfactory knowledge, risk management, and skills associated with aircraft flight instruments and systems related to IFR operations.

STUDY ASSIGNMENT
Instrument Flying Handbook Ch. 4, Sections 1 & 2, Ch. 5, Section 1; PHAK Ch. 7

STAGE I
GROUND LESSON 3
ATTITUDE INSTRUMENT FLYING

LESSON REFERENCES
Instrument Flying Handbook Ch. 4, Sections 1 & 2; Ch. 5, Section 1; PHAK Ch. 7

RECOMMENDED SEQUENCE
1. Lesson Introduction
2. Material Presentation and Discussion
3. Knowledge Review

LESSON OBJECTIVE
Students are introduced to attitude instrument flying via instrument cross-check, interpretation, and aircraft control. Students will gain an understanding of the instrument cockpit check, system failures, partial panel flying, and recovery from unusual flight attitudes.

CONTENT

Basic Instrument Skills
___ Instrument Cross-Check
___ Instrument Interpretation
___ Aircraft Control
___ Control and Performance Method
___ Primary and Supporting Method

Basic Flight Maneuvers
___ Straight and Level
___ Standard Rate Turns
___ Airspeed Changes
___ Constant Airspeed Climbs and Descents
___ Constant Rate Climbs and Descents
___ Level-offs from Climbs and Descents
___ Stalls

Instrument Failures
___ Gyroscopic Instrument/System Failure
___ Pitot/Static Instrument/System Failure
___ Compass Turns and Timed Turns
___ Pitot-Static Instrument Failures
___ Electronic Instrument Failures
___ ATC Reporting and Assistance

COMPLETION STANDARDS
Through in-class oral and/or written quizzing students will exhibit satisfactory knowledge, risk management, and skills associated with attitude instrument flying.

STUDY ASSIGNMENT
Instrument Flying Handbook Ch. 7; AIM Ch. 1

STAGE I
GROUND LESSON 4
NAVIGATION EQUIPMENT

LESSON REFERENCES
Instrument Flying Handbook Ch. 7;
AIM Ch. 1

RECOMMENDED SEQUENCE
1. Lesson Introduction
2. Material Presentation and Discussion
3. Knowledge Review

LESSON OBJECTIVE
Students will gain an understanding of the use and limitations of land and satellite-based navigation systems.

CONTENT

Navigation System Components
___ Navigation Radio
___ Omni-Bearing Selector (OBS)
___ Horizontal Situation Indicator (HSI)
___ GPS Receiver and Display
___ Automatic Direction Finder (ADF)
___ Radio Magnetic Indicator (RMI)
___ Distance Measuring Equipment (DME)

VOR Navigation
___ VOR/VORTAC Facilities
___ Accuracy Checks
___ Instrument Interpretation
___ Reverse Sensing Prevention
___ VOR Limitations
___ Intercepting and Tracking
___ Time, Speed, and Distance to Station
___ DME Arcs

NDB/ADF Navigation
___ Non-Directional Radio Beacons
___ Interpreting ADF Indications
___ Intercepting a Bearing or Course
___ Tracking and Homing
___ ADF Limitations

Localizer Navigation
___ Localizer Facility
___ Localizer Indications
___ Reverse Sensing Prevention
___ Localizer Service Limitations

Area Navigation (RNAV)
___ Global Positioning System (GPS)
___ RAIM capability and limitations
___ Wide Area Augmentation System (WAAS)
___ Inertial Navigation System (INS)
___ Long Range Navigation (LORAN)

COMPLETION STANDARDS
Through in-class oral and/or written quizzing students will exhibit satisfactory knowledge, risk management, and skills associated with land and satellite-based navigation aids.

STUDY ASSIGNMENT
FARs Part 1, 61, 67, 91; NTSB 830;
AIM Chs. 1 – 9 for Instrument

STAGE I
GROUND LESSON 5
FEDERAL AVIATION REGULATIONS

LESSON REFERENCES
FARs Part 1, 61, 67, 91; NTSB 830;
AIM Chs. 1 – 9 for Instrument

STUDY ASSIGNMENT
Instrument Flying Handbook Ch. 8;
AIM Ch. 3; PHAK Ch. 13, 14;
AC 150-5340-1J

RECOMMENDED SEQUENCE
1. Lesson Introduction
2. Material Presentation and Discussion
3. Knowledge Review

LESSON OBJECTIVE
Students will obtain an understanding of the Federal Aviation Regulations and sections of the AIM pertinent to instrument flight, and review NTSB 830.

CONTENT
Federal Aviation Regulations
___ Part 1
___ Part 61
___ Part 67
___ Part 91
___ Part 830 (NTSB)

Aeronautical Information Manual
___ AIM (Aeronautical Information Manual) Overview
___ Pilot/Controller Glossary
___ NASA Aviation Safety System Form

COMPLETION STANDARDS
Through in-class oral and/or written quizzing students will exhibit satisfactory knowledge, risk management, and skills associated with FARs related to instrument flight.

STAGE I
GROUND LESSON 6
AIRPORTS, AIRSPACE,
FLIGHT INFORMATION

LESSON REFERENCES
Instrument Flying Handbook Ch. 8;
AIM Ch. 3; PHAK Ch. 13, 14;
AC 150-5340-1J

RECOMMENDED SEQUENCE
1. Lesson Introduction
2. Material Presentation and Discussion
3. Knowledge Review

LESSON OBJECTIVE
Students will become familiar with the airport environment, focusing on safe and efficient aircraft operations including runway incursion avoidance, collision avoidance, and wind shear avoidance. The student will increase knowledge of the National Airspace System, and sources of flight information.

CONTENT
Airport Environment
___ Runway & Taxiway Signs, Markings, and Lighting
___ Lighting Systems
___ Visual Glide Slope Indicators
___ Runway Incursion Avoidance
___ Collision Avoidance
___ Wind Shear Avoidance Procedures

Airspace
___ National Airspace System
___ Types of Airspace/Airspace Classes
___ Charting Symbology
___ Operating Rules, Pilot Certifications, and Aircraft Equipment
___ Special Use, Restricted, and Other Airspace
___ Temporary Flight Restrictions

Flight Information
___ AIM
___ Chart Supplement
___ Notices to Airmen (NOTAMS)
___ Advisory Circulars (ACs)

COMPLETION STANDARDS
Through in-class oral and/or written quizzing students will exhibit satisfactory knowledge, risk management, and skills associated with airports, airspace, and sources of flight information.

STUDY ASSIGNMENT
Instrument Flying Handbook Ch. 9;
AIM Chap. 4

STAGE I
GROUND LESSON 7
AIR TRAFFIC CONTROL SYSTEM

LESSON REFERENCES
Instrument Flying Handbook Ch. 9;
AIM Chap. 4

STUDY ASSIGNMENT
Instrument Flying Handbook Ch. 10, Appendix A (Clearance Shorthand); AIM Chap. 4, 5

RECOMMENDED SEQUENCE
1. Lesson Introduction
2. Material Presentation and Discussion
3. Knowledge Review

LESSON OBJECTIVE
The student will become familiar with the various services available through the air traffic control system, including the use of enroute and terminal facilities for IFR flight operations.

CONTENT

Air Traffic Control System
___ Air Route Traffic Control Center (ARTCC)
___ Processing the IFR Flight Plan
___ Enroute Traffic Separation
___ Weather Information
___ ATIS
___ Clearance Delivery
___ Control Tower
___ Departure and Approach Control
___ Radar Service for VFR Aircraft
___ Traffic Advisories
___ Flight Service Stations
___ Safety Alerts
___ Emergency Assistance

COMPLETION STANDARDS
Through in-class oral and/or written quizzing students will exhibit satisfactory knowledge, risk management, and skills associated with IFR operations in the ATC system.

STAGE I
GROUND LESSON 8
ATC CLEARANCES

LESSON REFERENCES
Instrument Flying Handbook Ch. 10, Appendix A (Clearance Shorthand); AIM Chap. 4, 5

STUDY ASSIGNMENT
Review all texts as necessary to prepare for Stage I exam.

RECOMMENDED SEQUENCE
1. Lesson Introduction
2. Material Presentation and Discussion
3. Knowledge Review

LESSON OBJECTIVE
The student will become familiar with various ATC clearances, clearance procedures and limitations, writing clearances in shorthand, and proper clearance read-backs.

CONTENT

ATC Clearances
___ Pilot Responsibilities
___ IFR Flight Plan and ATC Clearance
___ Composite Flight Plan
___ Elements of the IFR Clearance (Format)
___ Abbreviated IFR Departure Clearances
___ Full Route Clearance
___ Cruise Clearance
___ VFR On Top
___ VFR Restrictions to an IFR Clearance
___ Pop-up or "Local" IFR Clearances
___ Hold For Release
___ Clearance Void Time
___ Approach Clearance
___ Clearance Readback
___ Clearance Shorthand

COMPLETION STANDARDS
Through in-class oral and/or written quizzing students will exhibit satisfactory knowledge, risk management, and skills associated with IFR clearances.

STAGE I
GROUND LESSON 9
STAGE I EXAM

LESSON REFERENCES
All material listed as references for lessons 1 – 8.

RECOMMENDED SEQUENCE
1. Testing
2. Critique

LESSON OBJECTIVE
The student will be tested on their level of knowledge on the topics presented in lessons 1 – 8.

CONTENT
Content of lessons 1 – 8.

COMPLETION STANDARDS
This lesson and stage are complete, and the student eligible to progress to the next stage of the course, when the student has completed the Stage I Exam with a minimum score of 80%.

STUDY ASSIGNMENT

Instrument Flying Handbook, Ch. 10, NACO Instrument Approach Charts, DPs, AIM Ch. 5, Section 2

STAGE II

STAGE II OBJECTIVES

During this stage, the student will learn proper methods for executing IFR departures, en route, holding, arrival, and instrument approach procedures. The student will demonstrate an increase in knowledge of FARs applicable to Instrument Rating operations.

STAGE II COMPLETION STANDARDS

This stage is complete when the student has demonstrated an understanding of the knowledge areas by completing the Stage II written exam with a minimum passing score of 80%.

STAGE II
GROUND LESSON 10
IFR DEPARTURES

LESSON REFERENCES
Instrument Flying Handbook, Ch. 10; NACO Instrument Approach Charts;, DPs;
AIM Ch. 5, Section 2

RECOMMENDED SEQUENCE
1. Lesson Introduction
2. Material Presentation and Discussion
3. Knowledge Review

LESSON OBJECTIVE
Students are introduced to the format used for presenting navigational information on departure charts, and learn to apply their knowledge in the execution of departure procedures.

CONTENT

Departure Charts

___ Obtaining Charts
___ Departure Standards
___ Instrument Departure Procedures (DPs)
___ Pilot Nav DP
___ Vectored DP

Departure Procedures

___ Pilot Responsibilities
___ Takeoff Minimums
___ Climb Gradients and Airplane Performance
___ Departure Considerations
___ Graphic and Textual Departure Procedures
___ Radar Departures
___ Non-Radar Departures
___ VFR Departures

COMPLETION STANDARDS
Through in-class oral and/or written quizzing students will exhibit satisfactory knowledge, risk management, and skills associated with IFR departures.

STUDY ASSIGNMENT
Instrument Flying Handbook, Ch. 8, 10; NACO Instrument Approach Charts, IFR Low En Route charts; AIM Ch. 5, Section 2;
FARs Part 91.169 – 91.187

STAGE II
GROUND LESSON 11
ENROUTE PROCEDURES

LESSON REFERENCES
Instrument Flying Handbook, Ch. 8, 10; NACO Instrument Approach Charts, IFR Low En Route charts; AIM Ch. 5, Section 2;
FARs Part 91.169 – 91.187

COMPLETION STANDARDS
Through in-class oral and/or written quizzing students will exhibit satisfactory knowledge, risk management, and skills associated with IFR en route procedures.

RECOMMENDED SEQUENCE
1. Lesson Introduction
2. Material Presentation and Discussion
3. Knowledge Review

STUDY ASSIGNMENT
Instrument Flying Handbook, Ch. 10;
AIM Ch. 5, Section 3

LESSON OBJECTIVE
Students are introduced to the format used for presenting navigational information on en route and area charts, and learn to execute IFR en route procedures.

CONTENT

Enroute/Area Charts
___ Enroute Charts
___ Front Panel
___ Navigation Aids
___ Federal "Victor" Airways
___ Communications
___ Airports
___ Airspace
___ Area Charts

Enroute Operations
___ Enroute Radar Procedures
___ 91.181 Course To Be Flown
___ 91.183 IFR Communication
___ Reporting Points and Procedures
___ Enroute GPS Navigation
___ Special Use Airspace
___ IFR Cruising Altitudes
___ Descent from the Enroute Segment

STAGE II
GROUND LESSON 12
HOLDING PROCEDURES

LESSON REFERENCES
Instrument Flying Handbook, Ch. 10;
AIM Ch. 5, Section 3

RECOMMENDED SEQUENCE
1. Lesson Introduction
2. Material Presentation and Discussion
3. Knowledge Review

LESSON OBJECTIVE
The student will develop a working knowledge of holding procedures, including types, entry, timing, communication, and lost communication scenarios.

CONTENT
Holding Procedures
___ Standard and Non-Standard Holds
___ ATC Holding Instructions
___ Expect Further Clearance Time (EFC)
___ Aircraft Configuration
___ Hold Entry Types
___ Visualizing the Entry
___ Lost Communications Procedures

COMPLETION STANDARDS
Through in-class oral and/or written quizzing students will exhibit satisfactory knowledge, risk management, and skills associated with IFR holding procedures.

STUDY ASSIGNMENT
Instrument Flying Handbook, Ch. 10;
AIM Chap. 5, Section 4;
NACO Instrument Approach Charts, Arrival Charts

STAGE II
GROUND LESSON 13
ARRIVAL PROCEDURES

LESSON REFERENCES
Instrument Flying Handbook, Ch. 10;
AIM Chap. 5, Section 4;
NACO Instrument Approach Charts, Arrival Charts

RECOMMENDED SEQUENCE
1. Lesson Introduction
2. Material Presentation and Discussion
3. Knowledge Review

LESSON OBJECTIVE
The student will develop a working knowledge of arrival charts and procedures.

CONTENT
Arrival Charts
___ Standard Terminal Arrival Route (STAR)
___ Interpreting STARs
___ Vertical Profile Planning

Arrival Procedures
___ Preparation for Arrival
___ Reviewing the Instrument Approach
___ Altitude
___ Airspeed

COMPLETION STANDARDS
Through in-class oral and/or written quizzing students will exhibit satisfactory knowledge, risk management, and skills associated with IFR arrival procedures.

STUDY ASSIGNMENT
Instrument Flying Handbook, Ch. 8, 10;
AIM Chap. 5, Section 4, 5;
NACO Instrument Approach Charts

STAGE II
GROUND LESSON 14
INSTRUMENT APPROACH PROCEDURES

LESSON REFERENCES
Instrument Flying Handbook, Ch. 8, 10;
AIM Chap. 5, Section 4, 5;
NACO Instrument Approach Charts

RECOMMENDED SEQUENCE
1. Lesson Introduction
2. Material Presentation and Discussion
3. Knowledge Review

LESSON OBJECTIVE
The student will develop a working knowledge of instrument approach charts and procedures.

CONTENT
Approach Segments
___ Initial Approach Segment
___ Intermediate Approach Segment
___ Final Approach Segment
___ Missed Approach Segment

Instrument Approach Charts

Chart Depiction
___ Heading Section
___ Minimum Safe/Sector Altitude
___ Plan View
___ Profile View
___ Step Down Fix and VDP
___ Final Approach Point or Fix
___ Missed Approach Icons
___ Landing Minima
___ Aircraft Approach Categories
___ Minimum Descent Requirements
___ Visibility Requirements
___ Inoperative Components

___ Heading
___ Minimum Safe/Sector Altitude
___ Plan View
___ Profile View
___ Step Down Fix and VDP
___ Final Approach Fix or Point
___ Missed Approach Icons
___ Landing Minima
___ Aircraft Approach Categories
___ Minimum Descent Requirements
___ Visibility Requirements
___ Inoperative Components

COMPLETION STANDARDS
Through in-class oral and/or written quizzing students will exhibit satisfactory knowledge, risk management, and skills associated with instrument approach procedures.

STUDY ASSIGNMENT
Instrument Flying Handbook, Ch. 8, 10:
AIM, Chap. 5, Sections 4, 5

STAGE II
GROUND LESSON 15
PREPARING FOR THE APPROACH

LESSON REFERENCES
Instrument Flying Handbook, Ch. 8, 10:
AIM, Ch. 5, Sections 4, 5

RECOMMENDED SEQUENCE
1. Lesson Introduction
2. Material Presentation and Discussion
3. Knowledge Review

LESSON OBJECTIVE
The student will learn how to make the transition from the enroute to the approach segment, and increase his/her understanding of instrument approach procedures.

CONTENT

Approach Procedures
___ Preparing for the Approach
___ IAP Review
___ Navigation Aid Settings
___ Approach Clearance
___ Executing the Approach
___ Straight-In Approaches
___ Circling Approaches
___ Sidestep Maneuvers
___ ATC Radar During Approaches
___ Course Reversals
___ Timed Approaches from a Holding Fix
___ Final Approach
___ Missed Approach
___ Visual and Contact Approaches
___ Closing the IFR Flight Plan

COMPLETION STANDARDS
Through in-class oral and/or written quizzing students will exhibit satisfactory knowledge, risk management, and skills associated with IAP preparation techniques and procedures.

STUDY ASSIGNMENT
Instrument Flying Handbook, Ch. 7, 10;
AIM, Ch. 1, Ch. 5, Section 4;
PHAK Ch. 15; NACO Instrument Approach Procedure charts

STAGE II
GROUND LESSON 16
NON-PRECISION APPROACHES

LESSON REFERENCES
Instrument Flying Handbook, Ch. 7, 10;
AIM, Ch. 1, Ch. 5, Section 4;
PHAK Ch. 15; NACO Instrument Approach Procedure charts

PHAK Ch. 15; NACO Instrument Approach Procedure charts

RECOMMENDED SEQUENCE
1. Lesson Introduction
2. Material Presentation and Discussion
3. Knowledge Review

LESSON OBJECTIVE
The student will learn how to conduct non-precision instrument approach procedures.

CONTENT
___ Off-Airport Facility
___ On-Airport Facility
___ VOR/DME Approach Procedures
___ Flying the VOR Approach
___ Localizer Approach
___ Localizer/Back Course Approach
___ LDA, SDF, and MLS Approaches

COMPLETION STANDARDS
Through in-class oral and/or written quizzing students will exhibit satisfactory knowledge, risk management, and skills associated with non-precision instrument approach procedures.

STUDY ASSIGNMENT
Instrument Flying Handbook, Ch. 7, 10;
AIM, Ch. 1, Ch. 5, Section 4;

STAGE II
GROUND LESSON 17
RNAV APPROACHES

LESSON REFERENCES
Instrument Flying Handbook, Ch. 7, 10;
AIM, Ch. 1, Ch. 5, Section 4;
PHAK Ch. 15; NACO Instrument Approach Procedure charts

STUDY ASSIGNMENT
Instrument Flying Handbook, Ch. 7, 10;
AIM, Ch. 1, Ch. 5, Section 4;

RECOMMENDED SEQUENCE
1. Lesson Introduction
2. Material Presentation and Discussion
3. Knowledge Review

LESSON OBJECTIVE
The student will learn how to conduct RNAV instrument approach procedures.

CONTENT

RNAV Approach Procedures
___ Approach Design
___ GPS Approach Types
___ Lateral/Vertical Navigation
___ GPS Equipment Requirements
___ GPS Navigation Database
___ Special GPS Considerations
___ GPS Overlay Approaches
___ GPS Stand-Alone Approaches
___ Vectors to a GPS Approach

COMPLETION STANDARDS
Through in-class oral and/or written quizzing students will exhibit satisfactory knowledge, risk management, and skills associated with RNAV approach procedures.

STAGE II
GROUND LESSON 18
PRECISION APPROACHES

LESSON REFERENCES
Instrument Flying Handbook, Ch. 7, 10;
AIM, Ch. 1, Ch. 5, Section 4;

RECOMMENDED SEQUENCE
1. Lesson Introduction
2. Material Presentation and Discussion
3. Knowledge Review

LESSON OBJECTIVE
The student will learn how to conduct precision instrument approach procedures.

CONTENT
___ ILS Categories and Minima
___ ILS Equipment Components
___ Inoperative Components
___ Straight-In ILS Approach
___ Vectors to Final on the ILS
___ ILS Approach with Course Reversal
___ ILS/DME Approach
___ ILS Approaches to Parallel Runways
___ Flying the ILS

COMPLETION STANDARDS
Through in-class oral and/or written quizzing students will exhibit satisfactory knowledge, risk management, and skills associated with ILS and LOC approach procedures.

STUDY ASSIGNMENT
All texts as necessary in preparation for Stage II exam.

STAGE II
GROUND LESSON 19
STAGE II EXAM

RECOMMENDED SEQUENCE

1. Testing
2. Critique

LESSON OBJECTIVE

The student will be tested on their level of knowledge on the topics presented in lessons 10- 18.

CONTENT

All material presented in lessons 10 – 18.

COMPLETION STANDARDS

This lesson and stage are complete, and the student eligible to progress to the next stage of the course, when the student has completed the Stage I Exam with a minimum score of 80%.

STUDY ASSIGNMENT

PHAK Ch. 11, 12; AIM Ch. 7; AC 00-6A Aviation Weather

STAGE III

STAGE III OBJECTIVES

During this stage, the student will increase his/her knowledge of weather, including methods of obtaining and analyzing information, conditions, and weather patterns before and during flight. The student will learn IFR flight planning, emergency procedures, and increase his/her understanding of aeronautical decision making.

STAGE III COMPLETION STANDARDS

This stage is complete when the student has demonstrated an understanding of the knowledge areas by completing the Stage III written exam with a minimum passing score of 80%.

STAGE III
GROUND LESSON 20
METEOROLOGY

LESSON REFERENCE:
PHAK Ch. 11, 12; AIM Ch. 7; AC 00-6 Aviation Weather

RECOMMENDED SEQUENCE
1. Lesson Introduction
2. Material Presentation and Discussion
3. Knowledge Review

LESSON OBJECTIVE
The student will increase knowledge of weather patterns and hazards related to IFR flight operations.

CONTENT
___ Atmosphere/Temperature
___ Moisture/Precipitation
___ Weather System Formation
___ Pressure and Wind Patterns
___ Cloud Types and Hazards
___ Air masses and Fronts
___ Thunderstorms and Microbursts
___ Turbulence
___ Wind Shear and Avoidance
___ Low Visibility
___ Fog
___ Cold Weather Operations
___ Types and Hazards of Icing/Frost

COMPLETION STANDARDS
Through in-class oral and/or written quizzing students will exhibit satisfactory knowledge, risk management, and skills associated with obtaining, understanding and applying weather information for a flight under IFR.

STUDY ASSIGNMENT
PHAK Ch. 11, 12;
AIM Chap. 7, Section 1
AC 00-45, Aviation Weather Services

STAGE III
GROUND LESSON 21
WEATHER INFORMATION I

LESSON REFERENCE
PHAK Ch. 11, 12;
AIM Chap. 7, Section 1
AC 00-45, Aviation Weather Services

RECOMMENDED SEQUENCE
1. Lesson Introduction
2. Material Presentation and Discussion
3. Knowledge Review

LESSON OBJECTIVE
The student will increase the ability to obtain and interpret textual weather information.

CONTENT

Weather Reports and Forecasts
___ Aviation Routine Weather Report
___ Radar Weather Reports
___ Pilot Weather Reports
___ Terminal Aerodrome Forecast
___ Aviation Area Forecast
___ Airmet, Sigmet, Convective Sigmet
___ Winds and Temperatures Aloft
___ Severe Weather Reports and Forecasts

Graphic Reports
___ Surface Analysis Chart
___ Weather Depiction Chart
___ Radar Summary Chart
___ Satellite Weather Photos
___ Composite Moisture Stability Chart
___ Constant Pressure Analysis Chart
___ Observed Winds and Temps Aloft

Graphic Forecasts
___ Low-Level Significant Weather Prog
___ Convective Outlook Chart
___ Forecast Winds and Temps Aloft
___ Volcanic Ash Forecast Transport and Dispersion Chart

COMPLETION STANDARDS
Through in-class oral and/or written quizzing students will exhibit satisfactory knowledge, risk management, and skills associated with obtaining, understanding and applying weather information for a flight under IFR.

STUDY ASSIGNMENT
PHAK Ch. 12;
AIM Chap. 7, Section 1
AC 00-45, Aviation Weather Services

STAGE III
GROUND LESSON 22
WEATHER INFORMATION II

LESSON REFERENCE:
Instrument Flying Handbook, Ch. 10;
PHAK Ch. 12;
AIM Chap. 7, Section 1;
AC 00-45, Aviation Weather Services

RECOMMENDED SEQUENCE
1. Lesson Introduction
2. Material Presentation and Discussion
3. Knowledge Review

LESSON OBJECTIVE
The student will increase his/her ability to obtain and utilize pre-flight and en route sources of weather information.

CONTENT
Preflight Weather Sources
___ Flight Service Station
___ Preflight Weather Briefing
___ Telephone Information Briefing Service (TIBS)
___ Direct User Access Terminal System (DUATS)
___ Private Industry Sources
___ Internet Sources

In-Flight Information Sources
___ Flight Service Stations
___ Center Weather Advisories
___ Hazardous In-Flight Weather Advisory Service (HIWAS)
___ Transcribed Weather Broadcasts
___ Weather Radar Services
___ Automated Weather Observing System (AWOS), AWOS – A, 1, 2, 3

COMPLETION STANDARDS
Through in-class oral and/or written quizzing students will exhibit satisfactory knowledge, risk management, and skills associated with obtaining, understanding and applying weather information.

STUDY ASSIGNMENT
Instrument Flying Handbook, Ch. 11;
AIM Ch. 6

STAGE III
GROUND LESSON 23
EMERGENCY PROCEDURES

LESSON REFERENCE:
Instrument Flying Handbook, Ch. 11;
PHAK Ch. 17; AIM Ch. 6

RECOMMENDED SEQUENCE
1. Lesson Introduction
2. Material Presentation and Discussion
3. Knowledge Review

LESSON OBJECTIVE
The student will learn to recognize, analyze and address IFR urgency and emergency procedures.

CONTENT
___ Malfunction Reports
___ Urgency versus Emergency
___ Declaring an Emergency
___ Minimum Fuel
___ Gyroscopic Instrument Failure
___ Communications Failure
___ Alerting ATC
___ Use of Transponder & Navigation Radio(s)
___ Route and Altitude
___ Leaving Clearance Limit
___ Emergency Approach Procedures

COMPLETION STANDARDS
Through oral quizzing students will demonstrate an understanding of the material presented during the lesson.

STUDY ASSIGNMENT
Instrument Flying Handbook, Ch. 10; Section 2; AIM Ch. 5, Section 1;
FAR Part 91.169

STAGE III
GROUND LESSON 24
FLIGHT PLANNING

LESSON REFERENCE:
Instrument Flying Handbook, Ch. 10; Section 2; AIM Ch. 5, Section 1; FAR Part 91.169

RECOMMENDED SEQUENCE
1. Lesson Introduction
2. Material Presentation and Discussion
3. Knowledge Review

LESSON OBJECTIVE
The student will gain the knowledge and proficiency required to plan an IFR flight and recognize factors pertinent to effective decision making.

CONTENT
IFR Decision Making
___ Decision Making Process
___ The IFR Accident Chain
___ Poor Judgment Chain
___ Assessing Risk
___ Responsibility of the Pilot In Command
___ Hazardous Attitudes
___ Crew Relationships
___ Communication
___ Resource Use
___ Workload Management
___ Situational Awareness
___ Controlled Flight Into Terrain

IFR Flight Planning
___ Big Picture View
___ Weather Considerations
___ Alternate Airport Requirements
___ IFR Preferred Routes
___ Route, Altitude, Performance Selection
___ Flight Information Publications
___ Fuel Planning/Reserve Requirements
___ Navigation Log
___ Filing an IFR Flight Plan
___ Closing an IFR Flight Plan

COMPLETION STANDARDS
Through oral quizzing students will demonstrate an understanding of the material presented during the lesson.

STUDY ASSIGNMENT
Review as necessary in preparation for Stage III Exam.

STAGE III
GROUND LESSON 25
STAGE III EXAM

RECOMMENDED SEQUENCE

1. Testing
2. Critique

LESSON OBJECTIVE

The student will be tested on their level of knowledge on the topics presented in lessons 20- 24.

CONTENT

All material presented in lessons 20 – 24.

COMPLETION STANDARDS

This stage is complete, and the student eligible to take the final exam, when the student has demonstrated an understanding of the knowledge areas by completing the Stage III written exam with a minimum passing score of 80%.

STUDY ASSIGNMENT

Review texts as necessary in preparation for Course Final Exam.

STAGE III
GROUND LESSON 26
COURSE FINAL EXAM

RECOMMENDED SEQUENCE

1. Testing
2. Critique

LESSON OBJECTIVE

The student will be tested on their knowledge of the material presented in lessons 1 – 24.

CONTENT

Material presented in lessons 1 – 24.

COMPLETION STANDARDS

The student shall complete the Course Final Exam with a minimum passing score of 80%, and the instructor should review any incorrect responses to ensure complete understanding.

STUDY ASSIGNMENT

Review any deficient areas as necessary based on results of the Course Final Exam.

INSTRUMENT RATING FLIGHT TRAINING SYLLABUS

COURSE OBJECTIVES

The student will obtain the necessary aeronautical skill, decision-making capability and experience necessary to meet the requirements for an Instrument Rating certificate with an airplane category rating.

COMPLETION STANDARDS

The student must demonstrate through flight tests and school records that the necessary aeronautical skill and experience requirements to obtain a Instrument Rating certificate with an airplane category rating have been met.

STAGE I OBJECTIVES

During this stage, the student will learn precise aircraft control solely by reference to the flight instruments.

STAGE I COMPLETION STANDARDS

At the completion of this stage, the student will demonstrate proficiency in precisely controlling the aircraft solely by reference to the flight instruments, to include full and partial panel instrument scenarios. The stage check will be conducted in accordance with current FAA Instrument Rating – Airplane Airman Certification Standards.

STAGE II OBJECTIVES

During this stage the student will learn to interpret and apply instrument departure, en route, arrival, and approach procedures, including holding procedures, using full and partial panel instrument references. The student will increase his/her proficiency in controlling the aircraft by instrument reference, and in the use of communication and navigation radios and lost communications procedures.

STAGE II COMPLETION STANDARDS

This stage is complete when the student can conduct IFR departure, en route, arrival (including holding), and approach procedures using full and partial panel instrument references. The stage check will be conducted in accordance with current FAA Instrument Rating – Airplane Airman Certification Standards.

STAGE III OBJECTIVES

During this stage, the student will gain additional proficiency in IFR cross-country operations in preparation for the end-of-course stage check.

STAGE III COMPLETION STANDARDS

This stage will be complete when the student demonstrates performance of IFR operations at a standard that exceeds current FAA Airman Certification Standards for the Instrument Rating - Airplane certificate.

INSTRUMENT RATING FLIGHT COURSE
TIME ALLOCATION TABLE

STAGE	LESSON	SCHD. TIME	DUAL	FLIGHT BRIEF	INSTRUMENT TRAINING	AATD	STAGE CHECK		A/C OR AATD
							ORAL	FLIGHT	
I	1	1.5	1.0	1.0		1.0			AATD
I	2	2.0	1.5	1.0	0.8				A/C
I	3	1.5	1.0	0.5		1.0			AATD
I	4	2.0	1.5	0.5	0.8				A/C
I	5	1.5	1.0	0.5		1.0			AATD
I	6	2.0	1.5	0.5	0.8				A/C
I	7	2.0	1.5	1.0	1.1				A/C
I	8	1.5	1.0	1.0		1.0			AATD
I	9	1.5	1.0	0.5	0.7				A/C
I	10	2.0	1.0	0.5		1.0			AATD
I	11	1.5	1.0	0.5	0.7				A/C
I	12	1.5	1.0	0.5		1.0			AATD
I	13	2.0	1.5	1.0	1.0				A/C
Stg Check	**14**	**2.0**	**1.5**	**0.5**	**1.2**		**1.5**	**1.5**	**A/C**
II	15	1.5	1.0	0.5		1.0			AATD
II	16	2.0	1.5	0.5	1.0				A/C
II	17	1.5	1.0	0.5		1.0			AATD
II	18	2.0	1.5	0.5	1.0				A/C
II	19	1.5	1.0	0.5		1.0			AATD
II	20	2.0	1.5	0.5	1.0				A/C
II	21	1.5	1.0	0.5		1.0			AATD
II	22	2.0	1.3	0.5	1.0				A/C
II	23	1.5	1.0	0.5		1.0			AATD
II	24	2.0	1.5	0.5		1.0			AATD
II	25	2.0	1.5	0.5	1.0				A/C
II	26	2.0	1.5	0.5	1.2				A/C
Stg Check	**27**	**2.0**	**2.0**	**0.5**	**1.7**		**2.0**	**2.0**	**A/C**
III	28	2.5 x-c	1.5	0.5	1.2				A/C
III	29	6.0 x-c	3.5	0.5	3.0				A/C
III	30	2.5	2.0	0.5	1.5				A/C
III	31	2.0	1.5	0.5	1.2				A/C
Stg Check	**32**	**2.5**	**2.0**	**0.5**	**1.6**		**2.0**	**2.0**	**A/C**
		Totals	**44.8**	**18.5**	**23.5**	**12.0**	**5.5**	**5.5**	

INSTRUMENT TRAINING
35.5

Note: Individual times shown on this table are for Instructor/student guidance only. They are not mandatory for each flight.

NOTE

Instructors shall provide not less than .5 briefing (combined pre-and post-flight) for every event.

STAGE I

STAGE I OBJECTIVES
During this stage, the student will learn precise aircraft control solely by reference to the flight instruments.

STAGE I COMPLETION STANDARDS
At the completion of this stage, the student will demonstrate proficiency in precisely controlling the aircraft solely by reference to the flight instruments, to include full and partial panel instrument scenarios. The student is at all times expected to seek zero tolerance for deviations in aircraft control (altitude, heading, airspeed) and navigational accuracy. The stage check will be conducted in accordance with current FAA Instrument Rating – Airplane Airman Certification Standards.

STAGE I
FLIGHT LESSON 1
DUAL AATD

RECOMMENDED SEQUENCE

1. Preflight Briefing
2. Flight
3. Post-Flight CFI Critique and Student Self - Evaluation

LESSON OBJECTIVE

The student is introduced to attitude instrument flying. Correct instrument scan, interpretation, pitch/power coordination and precise aircraft control are emphasized.

CONTENT

PREFLIGHT BRIEFING

___ Aircraft Certificates and Documents
___ Review Aircraft Weight and Balance
___ Review Operation of Systems
___ Postflight Procedures

INTRODUCTION

___ Use of Checklists
___ Aircraft Systems Related to IFR Operations
___ Aircraft Flight Instruments
___ Instrument Cockpit Check and Equipment Inspection
___ Collision Avoidance Precautions

Full Panel Instrument

___ Straight-and-Level Flight
___ Standard Rate Turns
___ Constant Bank Turns
___ Constant Airspeed Climbs and Descents
___ Constant Rate Climbs and Descents
___ Climbing and Descending Turns
___ Change of Airspeed
___ Maneuvering During Slow Flight
___ Use of Trim

COMPLETION STANDARDS

The student will demonstrate an understanding of the correlation between instrument reference and aircraft control. During all maneuvers altitude should be maintained +/- 100', headings +/- 10^0, airspeeds +/- 5 knots.

DATE___/___/___ DUAL____ IR____ BRF____

_____
Student Name / Signature

_____
CFI Name / Signature / CFI # & EXP.

_____
RTE OF FLIGHT

_____
IAPs / Holds (SPECIFY Name, Location)

LESSON GRADE_____

STAGE I
FLIGHT LESSON 2
DUAL — LOCAL

RECOMMENDED SEQUENCE

1. Preflight Briefing
2. Flight
3. Post-Flight CFI Critique and Student Self - Evaluation

LESSON OBJECTIVE
The student will review attitude instrument flying and apply the knowledge, risk management and skill in the training aircraft.

CONTENT
REVIEW
___ Aircraft Systems Related to IFR Operations
___ Aircraft Flight Instruments
___ Instrument Cockpit Check
___ Instrument Crosscheck, Interpretation and Aircraft Control

Full Panel Instrument
___ Straight-and-Level Flight
___ Standard Rate Turns
___ Constant Bank Turns
___ Constant Airspeed Climbs and Descents
___ Constant Rate Climbs and Descents
___ Climbing and Descending Turns
___ Change of Airspeed
___ Maneuvering During Slow Flight
___ Use of Trim

INTRODUCTION
___ Preflight Inspection
___ Runway Incursion Avoidance
___ Normal and/or Crswd Takeoff & Climb
___ Normal and/or Crswd Appch & Landing
___ Checking Instruments and Equipment
___ Postflight Procedures

COMPLETION STANDARDS
The student will demonstrate increased knowledge, risk management and skill in attitude instrument flying. During all maneuvers altitude should be maintained +/- 100', headings +/- 10^0, airspeeds +/- 5 knots.

DATE___/___/___ DUAL____ IR____ BRF____

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Student Name / Signature

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CFI Name / Signature / CFI # & EXP.

_____ _____
RTE OF FLIGHT **Landing Location(s)**

_____
IAPs / Holds (SPECIFY Name, Location)

LESSON GRADE_____

STAGE I
FLIGHT LESSON 3
DUAL AATD

RECOMMENDED SEQUENCE

1. Preflight Briefing
2. Flight
3. Post-Flight CFI Critique and Student Self - Evaluation

LESSON OBJECTIVE

During this lesson the student will increase proficiency in systems and equipment checks, and in attitude instrument flying.

COMPLETION STANDARDS

The student will demonstrate prompt recognition and proper recovery from stalls and unusual attitudes. During all maneuvers altitude should be maintained +/- 100', headings +/- 10^0, airspeeds +/- 5 knots.

CONTENT

REVIEW

___ Aircraft Systems Related to IFR Operations
___ Aircraft Flight Instruments
___ Instrument Cockpit Check

Full Panel Instrument

___ Constant Airspeed Climbs and Descents
___ Constant Rate Climbs and Descents
___ Straight and Level
___ Standard Rate Turns
___ Change of Airspeed
___ Maneuvering During Slow Flight

INTRODUCTION

Full Panel Instrument

___ Instrument Takeoff (AATD)
___ Power-Off Stall (Imminent/Full)
___ Power-On Stall (Imminent/Full)
___ Turning Stall (Imminent/Full)
___ Steep Turns
___ Compass Turns
___ Timed Turns to Compass Headings
___ Operations in Turbulence
___ Recovery From Unusual Flight Attitudes

DATE___/___/___ DUAL____ IR____ BRF____

_____
Student Name / Signature

_____
CFI Name / Signature / CFI # & EXP.

_____
RTE OF FLIGHT

_____
IAPs / Holds (SPECIFY Name, Location)

LESSON GRADE_____

STAGE I
FLIGHT LESSON 4
DUAL — LOCAL

RECOMMENDED SEQUENCE

1. Preflight Briefing
2. Flight
3. Post-Flight CFI Critique and Student Self - Evaluation

LESSON OBJECTIVE

During this lesson the student will increase proficiency in attitude instrument flying.

CONTENT

REVIEW

___ Aircraft Systems Related to IFR Operations
___ Preflight Inspection
___ Aircraft Flight Instruments
___ Instrument Cockpit Check
___ Postflight Procedures

Full Panel Instrument

___ Basic Instrument Flight Maneuvers
___ Change of Airspeed
___ Maneuvering During Slow Flight
___ Power-Off Stall (Imminent/Full)
___ Power-On Stall (Imminent/Full)
___ Turning Stall (Imminent/Full)
___ Steep Turns
___ Timed Turns to Compass Headings
___ Compass Turns
___ Operations in Turbulence
___ Wind Shear Avoidance Procedures
___ Recovery From Unusual Flight Attitudes

COMPLETION STANDARDS

The student will demonstrate increased knowledge, risk management and skill during all tasks, demonstrate prompt recognition and proper recovery from stalls and unusual attitudes. During all maneuvers altitude should be maintained +/- 100', headings +/- 10^0, airspeeds +/- 5 knots. Takeoffs and landings shall meet or exceed current FAA Private Pilot ACS.

DATE___/___/___ DUAL____ IR____ BRF____

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Student Name / Signature

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CFI Name / Signature / CFI # & EXP.

_____ _____
RTE OF FLIGHT **Landing Location(s)**

_____
IAPs / Holds (SPECIFY Name, Location)

LESSON GRADE_____

STAGE I
FLIGHT LESSON 5
DUAL AATD

RECOMMENDED SEQUENCE

1. Preflight Briefing
2. Flight
3. Post-Flight CFI Critique and Student Self - Evaluation

LESSON OBJECTIVE

During this lesson the student is introduced to recognition of various instrument failure modes and partial panel instrument flying.

CONTENT
REVIEW

Full Panel Instrument

___ Instrument Takeoff
___ Steep Turns
___ Change of Airspeed
___ Recovery From Unusual Flight Attitudes

INTRODUCTION
Partial Panel Instrument

___ Instrument Failure Indications
___ Attitude Indicator Failure
___ Heading Indicator Failure
___ Airspeed Indicator Failure
___ Malfunction Reports
___ Basic Instrument Flight Maneuvers
___ Constant Bank Turns
___ Timed Turns to Compass Headings
___ Change of Airspeed
___ Maneuvering During Slow Flight
___ Use of Trim
___ Power-Off Stall (Imminent)
___ Power-On Stall (Imminent)
___ Turning Stall (Imminent)

COMPLETION STANDARDS

The student will demonstrate increased knowledge, risk management and skill during all tasks, and altitude should be maintained +/- 100', headings +/- 10^0, airspeeds +/- 5 knots. During partial panel maneuvers, altitudes will be maintained +/- 150', headings +/- 15^0, and airspeeds +/- 10 knots.

DATE___/___/___ DUAL____ IR____ BRF____

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Student Name / Signature

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CFI Name / Signature / CFI # & EXP.

_____
RTE OF FLIGHT

_____
IAPs / Holds (SPECIFY Name, Location)

LESSON GRADE_____

STAGE I
FLIGHT LESSON 6
DUAL — LOCAL

RECOMMENDED SEQUENCE

1. Preflight Briefing
2. Flight
3. Post-Flight CFI Critique and Student Self - Evaluation

LESSON OBJECTIVE

The student will increase proficiency with recognition of various instrument failure modes and partial panel instrument flying.

REVIEW

___ Preflight Inspection

Full Panel

___ Steep Turns
___ Power-Off Stall
___ Power-On Stall
___ Change of Airspeed

Partial Panel

___ Instrument Failure Indications
___ Malfunction Reports
___ Basic Instrument Flight Maneuvers
___ Constant Bank Turns
___ Timed Turns to Compass Headings
___ Maneuvering During Slow Flight
___ Power-Off Stall
___ Power-On Stall
___ Turning Stall
___ Use of Trim

Postflight

___ Postflight Procedures

COMPLETION STANDARDS

The student will demonstrate increased knowledge, risk management and skill during all tasks, and altitudes shall be maintained +/- 100', headings +/- 10^0, airspeeds +/- 5 knots. Takeoffs and landings shall meet or exceed current FAA Private Pilot ACS.

DATE___/___/___ DUAL____ IR____ BRF____

_____
Student Name / Signature

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CFI Name / Signature / CFI # & EXP.

_____ _____
RTE OF FLIGHT **Landing Location(s)**

_____
IAPs / Holds (SPECIFY Name, Location)

LESSON GRADE_____

STAGE I
FLIGHT LESSON 7
DUAL — LOCAL

RECOMMENDED SEQUENCE

1. Preflight Briefing
2. Flight
3. Post-Flight CFI Critique and Student Self - Evaluation

LESSON OBJECTIVE

The student will demonstrate increased knowledge, risk management and skill in aircraft control during both full and partial panel scenarios.

CONTENT
REVIEW

___ Preflight Inspection
___ Aircraft Systems Related to IFR Operations
___ Aircraft Flight Instruments
___ Instrument Cockpit Check

Full Panel

___ Normal and/or Crswd Takeoff & Climb
___ Normal and/or Crswd Appch & Landing
___ Basic Instrument Flight Maneuvers
___ Maneuvering During Slow Flight
___ Power-Off Stall (Imminent)
___ Power-On Stall (Imminent)
___ Steep Turns
___ Recovery from Unusual Flight Attitudes

Partial Panel

___ Basic Instrument Flight Maneuvers
___ Simulated In-Flight Icing
___ Timed Turns to Compass Headings
___ Maneuvering During Slow Flight
___ Power-Off Stall (Imminent)
___ Power-On Stall (Imminent)
___ Recovery from Unusual Flight Attitudes

Postflight

___ Postflight Procedures

COMPLETION STANDARDS

The student will demonstrate increased knowledge, risk management and skill for all tasks. During flight, the student will maintain altitude +/- 100', headings +/- 10^0, airspeeds +/- 10 knots, and climb/descent rates +/- 100 FPM. Takeoffs and landings shall meet or exceed Current FAA Private Pilot ACS.

DATE___/___/___ DUAL____ IR____ BRF____

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Student Name / Signature

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CFI Name / Signature / CFI # & EXP.

_____ _____
RTE OF FLIGHT **Landing Location(s)**

_____
IAPs / Holds (SPECIFY Name, Location)

LESSON GRADE_____

STAGE I
FLIGHT LESSON 8
DUAL AATD

RECOMMENDED SEQUENCE

1. Preflight Briefing
2. Flight
3. Post-Flight CFI Critique and Student Self - Evaluation

LESSON OBJECTIVE

The student will learn VOR and DME orientation, intercepting and tracking, be introduced to GPS navigation, and be introduced to simulated air traffic control clearances.

CONTENT

REVIEW

Partial Panel

___ Timed Turns to Compass Headings
___ Compass Turns
___ Basic Instrument Flight Maneuvers
___ Maneuvering During Slow Flight
___ Power-Off Stall (Imminent)
___ Power-On Stall (Imminent)
___ Turning Stall
___ Recovery from Unusual Flight Attitudes

INTRODUCTION

Full Panel

___ ATC Clearances and Procedures
___ Navigation Equipment
___ VOR Inspection Records
___ VOR Accuracy Checks
___ VOR Orientation, Intercepting and Tracking
___ Time, Speed, Distance to a VOR station
___ Intercepting and Tracking DME arcs
___ GPS Orientation, Int. and Tracking (If Installed)
___ GPS Receiver Failure (If Installed)

COMPLETION STANDARDS

The student will demonstrate increased proficiency in attitude instrument flight, VOR, DME and GPS orientation, intercepting, and tracking. During all tasks, the student will maintain altitude +/- 100', headings +/- 10^0, airspeeds +/- 10 knots, and climb/descent rates +/- 100 FPM.

DATE___/___/___ DUAL____ IR____ BRF____

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Student Name / Signature

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CFI Name / Signature / CFI # & EXP.

_____
RTE OF FLIGHT

_____
IAPs / Holds (SPECIFY Name, Location)

LESSON GRADE_____

STAGE I
FLIGHT LESSON 9
DUAL — LOCAL

RECOMMENDED SEQUENCE

1. Preflight Briefing
2. Flight
3. Post-Flight CFI Critique and Student Self - Evaluation

LESSON OBJECTIVE

During this lesson the student will review partial panel instrument flying, VOR and GPS orientation, intercepting and tracking, and increase proficiency in obtaining, noting, and reading back actual ATC clearances.

CONTENT

REVIEW

___ Preflight Inspection
___ Navigation Equipment
___ VOR Accuracy Checks
___ Air Traffic Control Clearances
___ Wind Shear Avoidance Procedures
___ IFR Low En Route charts, Departure Procedures, STARs, IAP charts

Full Panel

___ VOR Inspection Records
___ VOR Orientation, Intercepting and Tracking
___ VOR Receiver Failure
___ Time, Speed, Distance to a VOR station
___ Intercepting and Tracking DME Arcs
___ GPS Orientation, Int. and Tracking
___ GPS Receiver Failure

INTRODUCTION
Partial Panel

___ Basic Instrument Flight Maneuvers
___ Timed Turns to Compass Headings
___ Compass Turns
___ Maneuvering During Slow Flight
___ Power-Off Stall
___ Power-On Stall
___ Turning Stall
___ VOR Orientation, Intercepting and Tracking
___ VOR Receiver Failure
___ Time, Speed, Distance to a VOR station
___ Intercepting and Tracking DME Arcs
___ GPS Orientation, Int. and Tracking

COMPLETION STANDARDS

The student will demonstrate increased knowledge, risk management and skill for all tasks. Altitudes will be maintained +/- 100', headings +/- 10^0, airspeeds +/- 10 knots, climb/descent rates +/- 100 FPM, course deviation no more than ½ scale during VOR, GPS tracking, and no more than 1.0 NM during DME Arc intercepting and tracking. Takeoffs and landings shall meet or exceed current FAA Private Pilot ACS.

DATE___/___/___ DUAL____ IR____ BRF____

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Student Name / Signature

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CFI Name / Signature / CFI # & EXP.

_____ _____
RTE OF FLIGHT **Landing Location(s)**

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IAPs / Holds (SPECIFY Name, Location)

LESSON GRADE_____

STAGE I
FLIGHT LESSON 10
DUAL AATD

RECOMMENDED SEQUENCE

1. Preflight Briefing
2. Flight
3. Post-Flight CFI Critique and Student Self - Evaluation

LESSON OBJECTIVE

The student will review VOR and GPS orientation and tracking, and be introduced to localizer orientation, intercepting and tracking.

CONTENT
REVIEW

___ Navigation Equipment
___ GPS Orientation, Int. and Tracking (Full and Partial Panel)
___ GPS Receiver Failure (Full and Partial Panel)

INTRODUCTION
Partial Panel

___ VOR Orientation, Intercepting and Tracking
___ VOR Time, Speed Distance
___ Intercepting and Tracking DME Arcs
___ VOR Receiver Failure

Full Panel

___ Localizer orientation, intercepting and tracking (front course and back course)

COMPLETION STANDARDS

The student will demonstrate increased knowledge, risk management and skill for all tasks. Altitudes will be maintained +/- 100', headings +/- 10^0, airspeeds +/- 10 knots, climb/descent rates +/- 100 FPM, course deviation no more than ½ scale during VOR, GPS, LOC, and no more than 1.0 NM during DME Arc intercepting and tracking.

DATE___/___/___ DUAL____ IR____ BRF____

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Student Name / Signature

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CFI Name / Signature / CFI # & EXP.

_____
RTE OF FLIGHT

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IAPs / Holds (SPECIFY Name, Location)

LESSON GRADE_____

STAGE I
FLIGHT LESSON 11
DUAL — LOCAL

RECOMMENDED SEQUENCE

1. Preflight Briefing
2. Flight
3. Post-Flight CFI Critique and Student Self - Evaluation

LESSON OBJECTIVE

The student will increase knowledge, risk management and skill with all listed tasks.

CONTENT
REVIEW

___ Preflight Inspection
___ Navigation Equipment
___ Postflight Procedures

Partial Panel

___ VOR Orientation, Intercepting and Tracking
___ Intercepting and Tracking DME Arcs
___ VOR Receiver Failure

Full Panel

___ GPS Orientation, Int. and Tracking
___ GPS Receiver Failure
___ Localizer orientation, intercepting and tracking (front course and back course)

COMPLETION STANDARDS

The student will demonstrate increased knowledge, risk management and skill with all tasks. Altitudes will be maintained +/- 100', headings +/- 10^0, airspeeds +/- 10 knots, climb/descent rates +/- 100 FPM, course deviation no more than ½ scale during VOR, GPS, LOC, and no more than 1.0 NM during DME Arc intercepting and tracking.

DATE___/___/___ DUAL____ IR____ BRF____

_____
Student Name / Signature

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CFI Name / Signature / CFI # & EXP.

_____ _____
RTE OF FLIGHT **Landing Location(s)**

_____
IAPs / Holds (SPECIFY Name, Location)

LESSON GRADE_____

STAGE I
FLIGHT LESSON 12
DUAL AATD

RECOMMENDED SEQUENCE

1. Preflight Briefing
2. Flight
3. Post-Flight CFI Critique and Student Self - Evaluation

LESSON OBJECTIVE

During this lesson the student will review full and partial panel GPS and localizer orientation intercepting and tracking.

CONTENT
REVIEW
Full and Partial Panel

___ GPS Orientation, Int. and Tracking (If Installed)
___ Localizer Orientation, Int. and Tracking (Front and Back Course)
___ Wind Shear Avoidance Procedures

COMPLETION STANDARDS

The student will demonstrate increased knowledge, risk management and skill on all listed tasks. Altitudes will be maintained +/- 100', headings +/- 10^0, airspeeds +/- 10 knots, climb/descent rates +/- 100 FPM, course deviation no more than ½ scale during VOR, GPS, LOC, and no more than 1.0 NM during DME Arc intercepting and tracking.

DATE___/___/___ DUAL____ IR____ BRF____

_____
Student Name / Signature

_____
CFI Name / Signature / CFI # & EXP.

_____
RTE OF FLIGHT

_____
IAPs / Holds (SPECIFY Name, Location)

LESSON GRADE_____

STAGE I
FLIGHT LESSON 13
DUAL — LOCAL

RECOMMENDED SEQUENCE

1. Preflight Briefing
2. Flight
3. Post-Flight CFI Critique and Student Self - Evaluation

LESSON OBJECTIVE

This is the last lesson before the Stage I check. The student will demonstrate increased knowledge, risk management and skill in all tasks.

CONTENT

Preflight Discussion

___ Preflight Inspection
___ Aircraft Systems Related to IFR Operations
___ Aircraft Flight Instruments
___ Instrument Cockpit Check
___ Compliance with Air Traffic Control Clearances

Full Panel and Partial Panel

___ Normal and/or Crswd Takeoff & Climb
___ Basic Instrument Flight Maneuvers
___ Maneuvering During Slow Flight
___ Power-Off Stall
___ Power-On Stall
___ Recovery From Unusual Flight Attitudes
___ VOR Orientation, Int. and Tracking
___ GPS Orientation, Int. and Tracking
___ Localizer Orientation, Int. and Tracking (Front and Back Course)
___ Intercepting and Tracking DME Arcs
___ Normal and/or Crswd Approach & Landing

COMPLETION STANDARDS

The student will demonstrate increased knowledge, risk management and skill on all listed tasks. Altitudes will be maintained +/- 100', headings +/- 10^0, airspeeds +/- 10 knots, climb/descent rates +/- 100 FPM, course deviation no more than ½ scale during VOR, GPS, LOC, and no more than 1.0 NM during DME Arc intercepting and tracking. Takeoffs and landings shall meet or exceed current FAA Private Pilot ACS.

DATE___/___/___ DUAL____ IR____ BRF____

_____
Student Name / Signature

_____
CFI Name / Signature / CFI # & EXP.

_____ _____
RTE OF FLIGHT **Landing Location(s)**

_____
IAPs / Holds (SPECIFY Name, Location)

LESSON GRADE_____

STAGE 1
FLIGHT LESSON 14
DUAL — LOCAL – STAGE CHECK

RECOMMENDED SEQUENCE

1. Preflight Briefing
2. Flight
3. Post-Flight CFI Critique and Student Self - Evaluation

LESSON OBJECTIVE

This is the stage I check conducted by the Chief Flight Instructor, Assistant Chief Flight Instructor, or designated Check Instructor to evaluate the student's knowledge and flight proficiency gained through lessons 1 – 13.

CONTENT

Oral

___ Aircraft Systems Related to IFR Operations
___ Aircraft Flight Instruments
___ Instrument Cockpit Check
___ Compliance with Air Traffic Control Clearances
___ Weather Information

Flight

Full Panel

___ Preflight Inspection
___ Normal and/or Crswd Takeoff & Climb
___ Basic Instrument Flight Maneuvers
___ Maneuvering During Slow Flight
___ Power-Off Stall
___ Power-On Stall
___ Recovery From Unusual Flight Attitudes
___ VOR Orientation, Int. and Tracking
___ GPS Orientation, Int. and Tracking
___ Localizer Orientation, Int. and Tracking (Front and Back Course)
___ Intercepting and Tracking DME Arcs
___ Normal and/or Crswd Approach/Lndg

Partial Panel

___ Basic Instrument Flight Maneuvers
___ Maneuvering During Slow Flight
___ Power-Off Stall
___ Power-On Stall
___ Recovery From Unusual Flight Attitudes
___ VOR Orientation, Int. and Tracking
___ GPS Orientation, Int. and Tracking
___ Localizer Orientation, Int. and Tracking (Front and Back Course)
___ Intercepting and Tracking DME Arcs

COMPLETION STANDARDS

Altitudes will be maintained +/- 100', headings +/- 10^0, airspeeds +/- 10 knots, climb/descent rates +/- 100 FPM, course deviation no more than ½ scale during VOR, GPS, LOC, and no more than 1.0 NM during DME Arc intercepting and tracking. Takeoffs and landings shall meet or exceed current FAA Private Pilot ACS.

DATE___/___/___ DUAL____ IR____ BRF____

_____
Student Name / Signature

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CFI Name / Signature / CFI # & EXP.

_____ _____
RTE OF FLIGHT **Landing Location(s)**

_____
IAPs / Holds (SPECIFY Name, Location)

LESSON GRADE_____

STAGE II

STAGE II OBJECTIVES

The student is introduced to instrument approach procedures, missed approach procedures, and holding patterns.

STAGE II COMPLETION STANDARDS

This stage is complete when the student is able to satisfactorily demonstrate the knowledge, risk management, and skill needed to conduct instrument approach procedures, missed approach procedures, holding patterns, and all other listed maneuvers and procedures at a level that meets or exceeds current FAA Instrument Rating Airman Certification Standards.

STAGE II
FLIGHT LESSON 15
DUAL AATD

RECOMMENDED SEQUENCE

1. Preflight Briefing
2. Flight
3. Post-Flight CFI Critique and Student Self - Evaluation

LESSON OBJECTIVE

During this lesson the student will be introduced to VOR, GPS and intersection holding patterns.

CONTENT

INTRODUCTION

___ IFR Low En Route charts, Departure Procedures, STARs, IAP charts
___ Compliance with Air Traffic Control Clearances
___ Holding Clearances
___ VOR Hold
___ GPS Hold
___ Intersection Hold

COMPLETION STANDARDS

The student will demonstrate correct receipt and readback of ATC holding clearances, and properly execute VOR and GPS holding procedures. Altitudes will be maintained +/- 100', headings +/- 10^0, airspeeds +/- 10 knots, climb/descent rates +/- 100 FPM, course deviation no more than ½ scale during intercepting and tracking.

DATE___/___/___ DUAL____ IR____ BRF____

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Student Name / Signature

_____
CFI Name / Signature / CFI # & EXP.

_____
RTE OF FLIGHT

_____
IAPs / Holds (SPECIFY Name, Location)

LESSON GRADE_____

STAGE II
FLIGHT LESSON 16
DUAL — LOCAL

RECOMMENDED SEQUENCE

1. Preflight Briefing
2. Flight
3. Post-Flight CFI Critique and Student Self - Evaluation

LESSON OBJECTIVE

During this lesson the student will be introduced to VOR, GPS and intersection holding patterns in the aircraft while working with ATC.

CONTENT
REVIEW

___ Preflight Inspection
___ Compliance with Air Traffic Control Clearances
___ VOR or Intersection Hold
___ GPS Hold
___ Postflight Procedures

COMPLETION STANDARDS

The student will demonstrate correct receipt and readback of ATC holding clearances, and properly execute all listed tasks. Altitudes will be maintained +/- 100', headings +/- 10^0, airspeeds +/- 10 knots, climb/descent rates +/- 100 FPM, course deviation no more than ½ scale during intercepting and tracking.

DATE___/___/___ DUAL____ IR____ BRF____

_____
Student Name / Signature

_____
CFI Name / Signature / CFI # & EXP.

_____ _____
RTE OF FLIGHT **Landing Location(s)**

_____
IAPs / Holds (SPECIFY Name, Location)

LESSON GRADE_____

STAGE II
FLIGHT LESSON 17
DUAL — AATD

RECOMMENDED SEQUENCE

1. Preflight Briefing
2. Flight
3. Post-Flight CFI Critique and Student Self - Evaluation

LESSON OBJECTIVE

During this lesson the student will increase proficiency with VOR holding patterns, and be introduced to partial panel holding patterns, LOC, GPS and missed approach procedures.

CONTENT
REVIEW

___ Compliance with Air Traffic Control Clearances
___ VOR Hold
___ Collision Avoidance
___ Wind Shear Avoidance Procedures

INTRODUCTION

___ Partial Panel Holding
___ Localizer Hold
___ Localizer Approach
___ GPS Approach
___ Missed Approach

COMPLETION STANDARDS

The student will demonstrate the knowledge, risk management and skill required to execute correct holding clearances and instrument approach procedures. Altitudes will be maintained +/- 100', headings +/- 10^0, airspeeds +/- 10 knots, climb/descent rates +/- 100 FPM, course deviation no more than ½ scale during intercepting and tracking, and if holding with timed inbound legs, achieve 1 minute inbound legs.

DATE___/___/___ DUAL____ IR____ BRF____

_____
Student Name / Signature

_____
CFI Name / Signature / CFI # & EXP.

_____
RTE OF FLIGHT

_____
IAPs / Holds (SPECIFY Name, Location)

LESSON GRADE_____

STAGE II
FLIGHT LESSON 18
DUAL — LOCAL

RECOMMENDED SEQUENCE

1. Preflight Briefing
2. Flight
3. Post-Flight CFI Critique and Student Self - Evaluation

LESSON OBJECTIVE

During this lesson the student will review full and partial panel holding patterns in the aircraft, and review GPS and localizer approach procedures.

CONTENT

REVIEW

___ Preflight Inspection
___ Normal Takeoff and Climb
___ Compliance with Air Traffic Control Clearances
___ Partial Panel Holding
___ Localizer approach
___ GPS approach
___ Localizer Hold
___ Normal Approach and Landing
___ Postflight Procedures

COMPLETION STANDARDS

The student will demonstrate the knowledge, risk management and skill required to execute correct holding clearances and instrument approach procedures. Altitudes will be maintained +/- 100', headings +/- 10^0, airspeeds +/- 10 knots, climb/descent rates +/- 100 FPM, course deviation no more than ½ scale during intercepting and tracking, and if holding with timed inbound legs, achieve 1 minute inbound legs. Takeoff and landing must meet or exceed current FAA Private Pilot ACS.

DATE___/___/___ DUAL____ IR____ BRF____

_____
Student Name / Signature

_____
CFI Name / Signature / CFI # & EXP.

_____ _____
RTE OF FLIGHT **Landing Location(s)**

_____
IAPs / Holds (SPECIFY Name, Location)

LESSON GRADE_____

STAGE II
FLIGHT LESSON 19
DUAL--AATD

RECOMMENDED SEQUENCE

1. Preflight Briefing
2. Flight
3. Post-Flight CFI Critique and Student Self - Evaluation

LESSON OBJECTIVE

During this lesson the student will review holding procedures and learn to conduct VOR, GPS, localizer, circling, and missed approach procedures. Lost communications procedures will be introduced.

CONTENT

REVIEW

___ Compliance with Air Traffic Control Clearances
___ Holding Procedures
___ DME Arc to an Instrument Approach

INTRODUCTION

___ VOR/VORTAC Approach
___ Localizer Approach (Back Course)
___ Circling Approach Procedure
___ Missed from a Circling Approach
___ Full Approach Procedure
___ Lost Communications Procedures

COMPLETION STANDARDS

The student will demonstrate the knowledge, risk management and skill required to execute correct holding clearances and instrument approach procedures. Altitudes will be maintained +/- 100', headings +/- 10^0, airspeeds +/- 10 knots, climb/descent rates +/- 100 FPM, course deviation no more than ½ scale during intercepting and tracking, and if holding with timed inbound legs, achieve 1 minute inbound legs.

DATE___/___/___ DUAL____ IR____ BRF____

_____
Student Name / Signature

_____
CFI Name / Signature / CFI # & EXP.

_____
RTE OF FLIGHT

_____
IAPs / Holds (SPECIFY Name, Location)

LESSON GRADE_____

STAGE II
FLIGHT LESSON 20
DUAL — LOCAL

RECOMMENDED SEQUENCE

1. Preflight Briefing
2. Flight
3. Post-Flight CFI Critique and Student Self - Evaluation

LESSON OBJECTIVE

The student will review non-precision instrument approach procedures, circling approach and missed approach procedures.

CONTENT

REVIEW

___ Preflight Inspection
___ Normal and/or Crswd Takeoff & Climb
___ Compliance with Air Traffic Control Clearances
___ DME Arc to an approach procedure
___ VOR/VORTAC Approach
___ Localizer Approach (Front Course)
___ Circling Approach
___ Straight-In Approach
___ Full Approach
___ Missed Approach
___ Lost Communications Procedures
___ Collision Avoidance
___ Wind Shear Avoidance Procedures
___ Landing from an Instrument Approach
___ Postflight Procedures

COMPLETION STANDARDS

The student will demonstrate the knowledge, risk management and skill required to execute correct holding clearances and instrument approach procedures. Altitudes will be maintained +/- 100', headings +/- 10^0, airspeeds +/- 10 knots, climb/descent rates +/- 100 FPM, course deviation no more than ½ scale while on the final approach segment of the approach procedure. The takeoff and landing must meet or exceed current FAA Private Pilot ACS.

DATE___/___/___ DUAL____ IR____ BRF____

_____
Student Name / Signature

_____
CFI Name / Signature / CFI # & EXP.

_____ _____
RTE OF FLIGHT **Landing Location(s)**

_____
IAPs / Holds (SPECIFY Name, Location)

LESSON GRADE_____

STAGE II
FLIGHT LESSON 21
DUAL — AATD

RECOMMENDED SEQUENCE

1. Preflight Briefing
2. Flight
3. Post-Flight CFI Critique and Student Self - Evaluation

LESSON OBJECTIVE

The student will review missed approach and lost communications procedures, and be introduced to ILS, localizer, no-gyro and ASR approach procedures.

CONTENT

REVIEW

___ Compliance with Air Traffic Control Clearances
___ Missed Approach Procedures
___ Lost Communications Procedures

INTRODUCTION

Partial Panel

___ Localizer Approach (Front Course)
___ GPS Approach
___ No-Gyro Radar Vectoring Approach
___ ASR Approach (If Available)

Full Panel

___ ILS Approach
___ Localizer Approach (Back Course)

COMPLETION STANDARDS

The student will demonstrate the knowledge, risk management and skill required to execute correct instrument approach procedures. Altitudes will be maintained +/- 100', headings +/- 10^0, airspeeds +/- 10 knots, climb/descent rates +/- 100 FPM, course deviation no more than ½ scale while on the final approach segment of the full-panel approach procedure and ¾ scale deflection during partial panel approach procedures.

DATE___/___/___ DUAL____ IR____ BRF____

_____
Student Name / Signature

_____
CFI Name / Signature / CFI # & EXP.

_____
RTE OF FLIGHT

_____
IAPs / Holds (SPECIFY Name, Location)

LESSON GRADE_____

STAGE II
FLIGHT LESSON 22
DUAL — LOCAL

RECOMMENDED SEQUENCE

1. Preflight Briefing
2. Flight
3. Post-Flight CFI Critique and Student Self - Evaluation

LESSON OBJECTIVE

The student will review missed approach procedures, and be introduced to ILS and full and partial panel localizer approaches.

CONTENT

The student will review front and back course localizer, ILS, missed approach, and partial panel approach procedures in the aircraft.

REVIEW

___ Preflight Inspection
___ Normal and/or Crswd Takeoff & Climb
___ Compliance with Air Traffic Control Clearances
___ Missed Approach Procedures
___ Lost Communications Procedures
___ Landing from an Instrument Approach

Full Panel

___ ILS Approach

Partial Panel

___ Localizer Approach (Front Course)
___ GPS Approach

COMPLETION STANDARDS

The student will demonstrate the knowledge, risk management and skill required to execute correct instrument approach procedures. Altitudes will be maintained +/- 100', headings +/- 10^0, airspeeds +/- 10 knots, climb/descent rates +/- 100 FPM, course deviation no more than ½ scale while on the final approach segment of the full-panel approach procedure and ¾ scale deflection during partial panel approach procedures. Takeoff and landing must meet or exceed current FAA Private Pilot ACS.

DATE___/___/___ DUAL____ IR____ BRF____

_____
Student Name / Signature

_____
CFI Name / Signature / CFI # & EXP.

_____ _____
RTE OF FLIGHT **Landing Location(s)**

_____
IAPs / Holds (SPECIFY Name, Location)

LESSON GRADE_____

STAGE II
FLIGHT LESSON 23
DUAL — AATD

RECOMMENDED SEQUENCE

1. Preflight Briefing
2. Flight
3. Post-Flight CFI Critique and Student Self - Evaluation

LESSON OBJECTIVE

The student will review full and partial panel non-precision approach procedures.

CONTENT
REVIEW

___ Missed Approach
___ Circling Approach
___ Full Approach
___ DME Arc to an Instrument Approach
___ Localizer (Back Course) Approach
___ Partial Panel GPS Approach
___ Partial Panel VOR Approach
___ Lost Communications Procedures
___ Collision Avoidance
___ Wind Shear Avoidance Procedures

COMPLETION STANDARDS

The student will demonstrate the knowledge, risk management and skill required to execute correct instrument approach procedures. Altitudes will be maintained +/- 100', headings +/- 10^0, airspeeds +/- 10 knots, climb/descent rates +/- 100 FPM, course deviation no more than ½ scale while on the final approach segment of the full-panel approach procedure and ¾ scale deflection during partial panel approach procedures.

DATE___/___/___ DUAL____ IR____ BRF____

_____
Student Name / Signature

_____
CFI Name / Signature / CFI # & EXP.

_____
RTE OF FLIGHT

_____
IAPs / Holds (SPECIFY Name, Location)

LESSON GRADE_____

STAGE II
FLIGHT LESSON 24
DUAL — AATD

RECOMMENDED SEQUENCE

1. Preflight Briefing
2. Flight
3. Post-Flight CFI Critique and Student Self - Evaluation

DATE___/___/___ DUAL____ IR____ BRF____

_____
Student Name / Signature

_____
CFI Name / Signature / CFI # & EXP.

_____
RTE OF FLIGHT

_____
IAPs / Holds (SPECIFY Name, Location)

LESSON GRADE_____

LESSON OBJECTIVE
The student will review precision and non-precision approach procedures.

CONTENT

REVIEW
___ Compliance with Air Traffic Control Clearances
___ Circling Approach
___ Missed Approach
___ Lost Communications Procedures

Partial Panel
___ GPS Approach w/ Procedure Turn
___ ILS Approach w/ Procedure Turn
___ VOR/VORTAC Approach
___ Approach from a DME Arc

COMPLETION STANDARDS
The student will demonstrate the knowledge, risk management and skill required to execute correct instrument approach procedures. Altitudes will be maintained +/- 100', headings +/- 10^0, airspeeds +/- 10 knots, climb/descent rates +/- 100 FPM, course deviation no more than ½ scale deflection while on the final approach segment of the full-panel approach procedure.

STAGE II
FLIGHT LESSON 25
DUAL — LOCAL

RECOMMENDED SEQUENCE

1. Preflight Briefing
2. Flight
3. Post-Flight CFI Critique and Student Self - Evaluation

LESSON OBJECTIVE

During this lesson the student will review landings, and be introduced to no-gyro radar vectoring approach procedures in the aircraft.

CONTENT
REVIEW

___ Preflight Inspection
___ Compliance with Air Traffic Control Clearances
___ Normal and/or Crswd Takeoff & Climb
___ GPS Approach
___ Partial Panel LOC/BC Approach
___ Landing from an Instrument Approach
___ Collision Avoidance
___ Wind Shear Avoidance Procedures
___ Postflight Procedures

COMPLETION STANDARDS

The student will demonstrate the knowledge, risk management and skill required to execute correct instrument approach procedures. Altitudes will be maintained +/- 100', headings +/- 10^0, airspeeds +/- 10 knots, climb/descent rates +/- 100 FPM, course deviation no more than ½ scale deflection while on the final approach segment of the full-panel approach procedure. Takeoff and landing must meet or exceed current FAA Private Pilot ACS.

DATE___/___/___ DUAL____ IR____ BRF____

_____
Student Name / Signature

_____
CFI Name / Signature / CFI # & EXP.

_____ _____
RTE OF FLIGHT **Landing Location(s)**

_____
IAPs / Holds (SPECIFY Name, Location)

LESSON GRADE_____

STAGE II
FLIGHT LESSON 26
DUAL — LOCAL

RECOMMENDED SEQUENCE

1. Preflight Briefing
2. Flight
3. Post-Flight CFI Critique and Student Self - Evaluation

LESSON OBJECTIVE

This is the last lesson before the stage II check. During the lesson the student will demonstrate Instrument Pilot ACS proficiency for all listed tasks.

CONTENT

Preflight Discussion

___ Instrument Approach Procedure Charts
___ Aircraft Systems Related to IFR Operations
___ Aircraft Flight Instruments and Navigation Equipment
___ Lost Communications Procedures
___ Weather Information

Flight

___ Preflight Inspection
___ Instrument Cockpit Check
___ Compliance with Air Traffic Control Clearances
___ Holding Procedures
___ Basic Instrument Flight Maneuvers
___ Recovery From Unusual Flight Attitudes
___ Intercepting and Tracking Navigational Systems and DME Arcs
___ VOR Approach
___ Localizer Approach (Partial Panel)
___ GPS Approach
___ Precision Approach
___ Circling Approach
___ Missed Approach
___ Lost Communications
___ Landing from an Instrument Approach
___ Postflight Procedures

COMPLETION STANDARDS

The student will demonstrate the knowledge, risk management and skill required to execute correct instrument approach procedures at a level that meets FAA Instrument Pilot Airman Certification Standard. Altitudes will be maintained +/- 100', headings +/- 10^0, airspeeds +/- 10 knots, climb/descent rates +/- 100 FPM, course deviation no more than ¾ scale deflection while on the final approach segment of the approach procedure. Takeoff and landing must meet or exceed current FAA Private Pilot ACS.

DATE___/___/___ DUAL____ IR____ BRF____

_____
Student Name / Signature

_____
CFI Name / Signature / CFI # & EXP.

_____ _____
RTE OF FLIGHT **Landing Location(s)**

_____
IAPs / Holds (SPECIFY Name, Location)

LESSON GRADE_____

STAGE II
FLIGHT LESSON 27
DUAL — LOCAL – STAGE CHECK

RECOMMENDED SEQUENCE

1. Preflight Briefing
2. Flight
3. Post-Flight CFI Critique and Student Self - Evaluation

LESSON OBJECTIVE

This lesson is a stage check conducted by the Chief Flight Instructor, Assistant Chief Flight Instructor, or designated Check Instructor. During the lesson the student will demonstrate Instrument pilot knowledge, risk management and skill on all listed tasks and maneuvers in accordance with current FAA Instrument Rating ACS.

CONTENT

Oral

___ Aircraft Systems Related to IFR Operations
___ Aircraft Flight Instruments and Navigation Equipment
___ Compliance with Air Traffic Control Clearances
___ Lost Communications Procedures
___ Weather Information

Flight

___ Preflight Inspection
___ Instrument Cockpit Check
___ Compliance with Air Traffic Control Clearances
___ Holding Procedures
___ Basic Instrument Flight Maneuvers
___ Recovery From Unusual Flight Attitudes
___ Intercepting and Tracking Navigational Systems and DME Arcs
___ VOR Approach
___ Localizer Approach (Partial Panel)
___ GPS Approach
___ Precision Approach
___ Circling Approach
___ Missed Approach
___ Lost Communications
___ Landing from an Instrument Approach

___ Collision Avoidance
___ Wind Shear Avoidance Procedures
___ Checking Instruments and Equipment
___ Postflight Procedures

COMPLETION STANDARDS

The student will demonstrate Instrument pilot knowledge, risk management and skill on all listed tasks in accordance with current FAA Instrument Rating ACS.

DATE___/___/___ DUAL____ IR____ BRF____

_____
Student Name / Signature

_____
CFI Name / Signature / CFI # & EXP.

_____ _____
RTE OF FLIGHT **Landing Location(s)**

_____
IAPs / Holds (SPECIFY Name, Location)

LESSON GRADE_____

STAGE III

STAGE III OBJECTIVES

During this stage the student will learn to plan and execute IFR cross-country procedures as the pilot in command, and refine previously learned skills in aircraft control, flight maneuvers, holding, and approach procedures.

STAGE III COMPLETION STANDARDS

This stage will be complete when the student demonstrates performance of an Instrument pilot at a standard that exceeds the minimum performance criteria established in the current FAA Instrument Rating Airman Certification Standards.

STAGE III
LESSON 28
DUAL – CROSS-COUNTRY

RECOMMENDED SEQUENCE

1. Preflight Briefing
2. Flight
3. Post-Flight CFI Critique and Student Self - Evaluation

LESSON OBJECTIVE

The student is introduced to planning and conduct of IFR cross-country procedures by planning and executing a short-distance IFR cross-country flight with a minimum distance of 50 NM between airport destinations. The student will demonstrate knowledge, risk management and skill for all listed tasks. The instructor will maximize the amount of simulated or actual instrument time to simulate a flight conducted almost entirely in instrument conditions.

CONTENT

INTRODUCTION

IFR Cross-Country Flight Planning

___ Weather Information
___ Determining Performance and Limitations
___ Navigation Log
___ IFR Flight Plan
___ Pre-Flight Inspection
___ Cockpit Management
___ Calculating ETE, ETA
___ STAR/Use of Radar

Emergency Procedures

___ Communication Radio Failure
___ Navigation Equipment Failure
___ Instrument Failure
___ Icing
___ Turbulence
___ Minimum Fuel
___ Engine Failure

REVIEW

___ Compliance with Air Traffic Control Clearances
___ Use of DPs/Radar
___ Navigation
___ Holding Procedures
___ Non-Precision Approach
___ Precision Approach
___ Landing From an Instrument Approach
___ Postflight Procedures

COMPLETION STANDARDS

The student will demonstrate the knowledge, risk management and skill required to conduct IFR cross-country procedures as pilot in command. Takeoffs and landings must exceed current FAA Private Pilot ACS.

DATE___/___/___ DUAL____ IR____ BRF____

_____
Student Name / Signature

_____
CFI Name / Signature / CFI # & EXP.

_____ _____
RTE OF FLIGHT Landing Location(s)

_____
X-COUNTRY TIME

_____
IAPs / Holds (SPECIFY Name, Location)

LESSON GRADE_____

STAGE III
LESSON 29
DUAL CROSS-COUNTRY

RECOMMENDED SEQUENCE

1. Preflight Briefing
2. Flight
3. Post-Flight CFI Critique and Student Self - Evaluation

LESSON OBJECTIVE

This lesson requires a three (3)-leg cross-country flight of not less than 250 NM along airways or ATC-directed routing, with landings at each airport, and with one segment of the flight being at least 100 NM straight-line distance between airports. The student will conduct three (3) different types of instrument approaches using navigation systems. The student will review IFR cross-country procedures and demonstrate Instrument pilot knowledge, risk management and skill proficiency for all listed tasks at a level that meets FAA Instrument Pilot Airman Certification Standard.

REVIEW

IFR Cross-Country Flight Planning

___ Weather Information
___ Determining Performance and Limitations
___ Navigation Log
___ IFR Flight Plan
___ Pre-Flight Inspection
___ Cockpit Management
___ Calculating ETE, ETA
___ Use of DPs/Radar
___ STAR/Use of Radar

Emergency Procedures

___ Communication Radio Failure
___ Navigation Equipment Failure
___ Instrument Failure
___ Icing
___ Turbulence
___ Minimum Fuel
___ Engine Failure

REVIEW

___ Compliance with Air Traffic Control Clearances
___ Navigation
___ Holding Procedures
___ Non-Precision Approach
___ Precision Approach
___ Landing From an Instrument Approach
___ Postflight Procedures

COMPLETION STANDARDS

The student will demonstrate knowledge, risk management and skill with IFR cross-country and emergency procedures as pilot in command at a level that meets FAA Instrument Pilot Airman Certification Standard. The lesson will meet the requirements of Part 141 App. C, 4(c).

DATE___/___/___ DUAL____ IR____ BRF____

_____
Student Name / Signature

_____
CFI Name / Signature / CFI # & EXP.

_____ _____
RTE OF FLIGHT **Landing Location(s)**

_____
X-COUNTRY TIME

_____
IAPs / Holds (SPECIFY Name, Location)

LESSON GRADE_____

STAGE III
LESSON 30
DUAL-LOCAL

RECOMMENDED SEQUENCE

1. Preflight Briefing
2. Flight
3. Post-Flight CFI Critique and Student Self - Evaluation

LESSON OBJECTIVE

During this lesson the student will review maneuvers and procedures and demonstrate Instrument pilot knowledge, risk management and skill at a level that exceeds current FAA Instrument Rating Airman Certification Standards. The lesson requires a minimum of three (3) instrument approach procedures.

CONTENT

Preflight Discussion

___ Instrument Approach Procedure Charts
___ Cross-Country Flight Planning
___ Aircraft Flight Instruments and Navigation Equipment
___ Aircraft Systems Related to IFR Operations
___ Lost Communications Procedures
___ Weather Information

Flight

___ Preflight Procedures
___ Instrument and Equipment Cockpit Check
___ Normal and/or Crosswind Takeoff and Climb
___ Departure Procedures
___ Compliance with Air Traffic Control Clearances
___ Holding Procedures
___ Basic Instrument Flight Maneuvers
___ Recovery From Unusual Attitudes
___ Non-Precision Approach w/ Procedure Turn
___ Non-Precision Approach (Partial Panel)
___ Precision Approach
___ Circling Approach
___ Missed Approach
___ Lost Communications Procedures
___ Landing from an Instrument Approach
___ Postflight Procedures

COMPLETION STANDARDS

The student will demonstrate Instrument pilot knowledge, risk management and skill on all listed tasks at a level that exceeds current FAA Instrument Rating Airman Certification Standards.

DATE___/___/___ DUAL____ IR____ BRF____

_____
Student Name / Signature

_____
CFI Name / Signature / CFI # & EXP.

_____ _____
RTE OF FLIGHT **Landing Location(s)**

_____
IAPs / Holds (SPECIFY Name, Location)

LESSON GRADE_____

STAGE III
LESSON 31
DUAL-LOCAL

RECOMMENDED SEQUENCE

1. Preflight Briefing
2. Flight
3. Post-Flight CFI Critique and Student Self - Evaluation

LESSON OBJECTIVE

This is the last lesson prior to the end-of-course stage check. The student is required to demonstrate Instrument pilot knowledge, proficiency, and ADM that meets or exceeds current FAA Instrument Rating Airman Certification Standards. This lesson requires three (3) instrument approaches.

CONTENT

Preflight Discussion

___ Instrument Approach Procedure Charts
___ Cross-Country Flight Planning
___ Pre-Flight Procedures
___ Weather Information
___ Emergency Operations
___ Aircraft Flight Instruments and Navigation Equipment
___ Aircraft Systems Related to IFR Operations

Flight

___ Preflight Inspection
___ Instrument Cockpit Check
___ Compliance with Air Traffic Control Clearances
___ Holding Procedures
___ Intercepting and Tracking Navigational Systems and DME Arcs
___ Basic Instrument Flight Maneuvers
___ Non-Precision Approach (w/ Procedure Turn)
___ Non-Precision Approach (Partial Panel)
___ Precision Approach (Partial Panel)
___ Circling Approach
___ Missed Approach
___ Lost Communications Procedures
___ Landing From an Instrument Approach

COMPLETION STANDARDS

The student will demonstrate Instrument pilot knowledge, risk management and proficiency on all listed tasks at a level that exceeds current FAA Instrument Rating Airman Certification Standards.

DATE___/___/___ DUAL____ IR____ BRF____

_____
Student Name / Signature

_____
CFI Name / Signature / CFI # & EXP.

_____ _____
RTE OF FLIGHT **Landing Location(s)**

_____
IAPs / Holds (SPECIFY Name, Location)

LESSON GRADE_____

STAGE III
LESSON 32
DUAL — LOCAL
END-OF-COURSE STAGE CHECK

RECOMMENDED SEQUENCE

1. Preflight Briefing
2. Flight
3. Post-Flight CFI Critique and Student Self - Evaluation

LESSON OBJECTIVE
This lesson is a stage check conducted by the Chief Flight Instructor, Assistant Chief Flight Instructor, or designated Check Instructor. During the lesson the student will demonstrate Instrument pilot knowledge, proficiency, and ADM on all listed tasks and maneuvers in accordance with current FAA Instrument Rating Airman Certification Standards.

CONTENT

Oral
___ Pilot Qualifications
___ Airworthiness Requirements
___ Cross-Country Flight Planning
___ Weather Information
___ Aircraft Flight Instruments and Navigation Equipment
___ Lost Communications Procedures

Flight
___ Preflight Inspection
___ Instrument Cockpit Check
___ IFR Flight Plan
___ Compliance with Air Traffic Control Clearances
___ Holding Procedures
___ Intercepting and Tracking Navigation Systems and DME Arcs
___ Non-Precision Approach (Full approach)
___ Non-Precision Approach (Partial Panel)
___ Precision Approach
___ Circling Approach
___ Missed Approach
___ Recovery From Unusual Flight Attitudes
___ Collision Avoidance
___ Wind Shear Avoidance Procedures
___ Landing From an Instrument Approach
___ Postflight Procedures

COMPLETION STANDARDS
The student will demonstrate Instrument pilot knowledge, risk management and proficiency on all listed tasks at a level that exceeds current FAA Instrument Rating Airman Certification Standards.

DATE___/___/___ DUAL____ IR____ BRF____

_____
Student Name / Signature

_____
CFI Name / Signature / CFI # & EXP.

_____ _____
RTE OF FLIGHT **Landing Location(s)**

_____
IAPs / Holds (SPECIFY Name, Location)

LESSON GRADE_____