

Semper Fly Helicopters

14 CFR PART 141 FLIGHT SCHOOL



**AVIA 3532 - INSTRUMENT PILOT FLYING
ROTORCRAFT / HELICOPTER
CERTIFICATION COURSE
FLIGHT TRAINING MANUAL**

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SECTION 1 - FLIGHT TRAINING SYLLABUS

1.1 - Course Requirements and Objectives

Enrollment Prerequisites

The Semper Fly Helicopters Instrument Pilot Flight Training Course is designed to have the students concurrently enrolled in the associated Semper Fly Helicopters Instrument Pilot Ground Training Course. As such, students must meet the following criteria:

1. Minimum Age: 17
2. English Proficiency - Students must be proficient in reading, writing, and speaking English to comply with FAA regulations
3. Financial Readiness - Students must be able to provide proof of ability to finance the training program, either through personal funds, loans, or GI Bill benefits for eligible veterans
4. Interview and Assessment - Semper Fly Helicopters reserves the right to conduct an interview in which the motivation and fitness for flight training can be assessed
5. Required Documents
 - A. U.S. Citizens
 - i. Proof of U.S. Citizenship
 - ii. Valid, unexpired U.S. passport OR
 - iii. Original or government-issued birth certificate of the U.S., American Samoa, or Swains Island AND a government-issued picture identification OR
 - iv. Original certification of birth abroad with raised seal (Form FS-545 or Form DS-1350) AND a government-issued picture identification OR
 - v. Original certificate of U.S. citizenship with raised seal (Form N-560 or N-561) or a Certificate of Repatriation (Form N-581) AND government-issued picture ID OR
 - vi. Original U.S. Naturalization Certificate with raised seal (Form N-550 or N-570) AND a government-issued picture ID
 - vii. FAA Class I or Class II Medical
 - viii. FAA Airman's Certificate: Private Pilot Certificate (Rotorcraft)
 - ix. FAA Knowledge Test (if completed)
 - B. Foreign Nationals
 - i. Passport
 - ii. Visa
 - iii. FAA Class I or Class II Medical
 - iv. Complete TSA Training application

Additionally, all students must satisfy the requirements identified in Part 141; Appendix C, applicable to the certificate or rating sought by the learner. If the student is degree seeking, they must meet the enrollment criteria of the University of Oklahoma Aviation Department.

Flight Training Course Objective

The student will obtain the knowledge, skill, and aeronautical experience necessary to meet the requirements for an Instrument Pilot Rating with a Rotorcraft/Helicopter category.

Flight Training Course Completion Standards

The student must demonstrate through written tests, flight tests, and show through appropriate records that he or she meets the knowledge, skill, and experience requirements necessary to obtain an Instrument Pilot Rating with a Rotorcraft/Helicopter category, while maintaining the standards set in the Semper Fly Helicopters Standard Operating Procedures and Safety Policies Manual and the Airman Certification Standards.

Flight Training Curriculum

Flight school for the Instrument Pilot student is accomplished by enrollment in the Semper Fly Helicopters pilot course and a minimum of 43.7 flight hours. An outline for each lesson is provided in the following Flight Training Syllabus. The flight instructor will be responsible for student knowledge who obtained credit by exam or who have not taken these courses.

Flight Training Textbooks

The flight-training course is structured by the Instrument Flying Handbook, FAA-H-8083-15B; Instrument Procedures Handbook, FAA-H-8261-1A; Risk Management Handbook, FAAH-8083-2; the Federal Regulations FAR/AIM, AC 00-6 Aviation Weather and AC 00-45 Aviation Weather Services or as amended. Flight training lessons generally follow the sequence and content of these textbooks. Other required reference materials are listed in the Introduction Section of the Airman Certification Standards.

Training Records

Semper Fly Helicopters will establish and maintain current and accurate records of the participation of each student enrolled in the aviation program. These records will include as a minimum the date the student was enrolled, a chronological log of the student's course attendance, the subjects, and flight operations covered in the student's training, and the names and grades of any tests taken by the student. Additionally, a record will be maintained on the date the student graduated, terminated training, or transferred to another school. Whenever a student graduates, terminates training, or transfers to another school, the student's record will be certified to that effect by the chief instructor. The school will retain each student record for at least 1 year from the date that the student either graduates from the course to which the record pertains, terminates enrollment in the course to which the record pertains, or transfers to another school. These records will be kept in accordance with 14 CFR 141.101. The school will make a copy of these records available to the student upon request.

1.2 - Instrument Pilot Course Minimum Time Summary

<u>TRAINING STAGE</u>	<u>DUAL</u>	<u>SIM</u>	<u>X/C</u>	<u>ORAL</u>	<u>GROUND</u>
Flight Stage One	11.5	6.6	5.1	11.0	
Flight Stage Two	22.2	3.4	2.8	12.2	
SUB-TOTAL	33.7	10.0	7.9	23.2	

TOTAL GROUND TIME FOR INSTRUMENT PILOT COURSE: 40.0 HOURS

TOTAL FLIGHT / SIM TIME FOR INSTRUMENT PILOT COURSE: 43.7 HOURS

MINIMUM TOTAL SIMULATED INSTRUMENT (HOOD) FLIGHT TIME: 38.2 HOURS

1.3 - Grading Rubric

After each lesson, the instructor will assign grades for each ground or flight activity using the following scale:

GRADE	STUDENT PERFORMANCE	DESCRIPTION
A	Exceeds Standards	The student meets the FAA Airman Certification Standards and usually (50% of the time or more) exceeds those standards.
B	Meets Standards	The student meets the FAA Airman Certification Standards.
C	Below Standards	The student does not meet the FAA Airman Certification Standards.
F	Failure	Ground: Student non-participation or refusal to re-train Flight: The safety of the flight is in question and/or the instructor was required to take control of the aircraft.
I	Incomplete	The allotted time was not sufficient for the student to perform the activity.
NG	Not Graded	The activity was not assigned to the student and will <u>not</u> be required to be completed in a separate training session.

NOTES

- With a grade of C, or F, the instructor must include amplifying comments on the grade form
- With a grade of C, F, or I, the student will be required to complete the activity to the FAA Airman Certification Standards in a separate training session.

SECTION 2 - STAGE ONE FLIGHT TRAINING

OBJECTIVES:

The primary objective during Stage One is to introduce basic instrument flying techniques and methods. The student will receive instruction on *Preflight Preparation, Preflight Procedures, Air Traffic Control Clearances and Procedures, Flight by Reference to Instruments, Navigation Systems and Instrument Approach Procedures*. The student must develop the proficiency for their check ride using Instrument Airman Certification Standards (ACS).

Each student must review the assignment for the scheduled flight lesson prior to arriving for training.

REFERENCES:

1. The Semper Fly Helicopters Training Syllabus for the Instrument Pilot Rotorcraft / Helicopter Certification Course
2. The Semper Fly Helicopters Private / Commercial Study Guide
3. Guimbal Cabri G2 Flight Manual
4. Guimbal Cabri G2 Flight Instructor Guide
5. The FAR/AIM Manual
6. Aeronautical Decision Making for Pilots
7. Instrument Rating – Helicopter Airman Certification Standards, FAA-S-ACS-14
8. Instrument Flying Handbook, FAA-H-8083-15B
9. Instrument Procedures Handbook, FAA-H-8261-1A
10. Helicopter Pilot Textbook. Jeppesen Sanderson, Inc.
11. Risk Management Handbook, FAA-H-8083-2

COMPLETION STANDARDS:

Refer to individual lesson completion standards

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2.1 - Lesson 1: Flight Operations Orientation	0.0		2.0	2-3
2.2 - Lesson 2: Flight by Reference to Instruments 1	1.6		0.8	2-4
2.3 - Lesson 3: Flight by Reference to Instruments 2 **	1.8		0.8	2-5
2.4 - Lesson 4: Flight by Reference to Instruments 3 **	1.6		0.8	2-6
2.5 - Lesson 5: Air Traffic Control Clearances & Procedures	1.9	1.9	0.8	2-7
2.6 - Lesson 6: Navigation Systems - Part 1	1.6	1.6	0.8	2-8
2.7 - Lesson 7: Navigation Systems - Part 2	1.6	1.6	0.8	2-9
2.8 - Lesson 8: Navigation Systems - Part 3 **	1.6		0.8	2-10
2.9 - Lesson 9: Instrument Approach Procedures - Part 1 **	1.6		0.8	2-11
2.10 - Lesson 10: Instrument Approach Procedures - Part 2	1.6		0.8	2-12
2.11 - Lesson 11: Instrument Approach Procedures - Part 3	1.6		0.8	2-13
2.12 - Lesson 12: Instrument Stage One Check	1.6		1.0	2-14
FLIGHT STAGE ONE - TOTAL HOURS	18.1	5.1	11.0	

**** Lesson to be completed in the simulator**

TOTAL FLIGHT / SIM HOURS STAGE ONE: 18.1

MINIMUM SIMULATED INSTRUMENT (HOOD) TIME: 15.6

2.1 - LESSON 1: FLIGHT OPERATIONS ORIENTATION

(Oral: 2.0 Hours)

OBJECTIVES:

This is an orientation of the flight school and flight line operations. This lesson provides an opportunity for the instructor and student to become acquainted. The instructor should resolve questions on the flight-training program.

CONTENTS:

1. Orientation of the aviation program and flight operations including aircraft and dispatch procedure
2. Create student records
3. Completion of Flight Release Form
4. Procedures Training
 - A. Practice Checklist Usage (“chair-fly”) for normal and emergency procedures using aircraft at ramp
5. Airworthiness
 - A. Airworthiness, Registration, Type Certificate, and Operational Limitations
 - B. Maintenance inspections
 - i. 100 hour inspections
 - ii. Annual inspections
 - iii. Airworthiness Directives
 - C. Equipment inspections
 - i. Emergency Locator Transmitter
 - ii. Transponder
 - iii. Pitot/static inspection
 - D. Weight and balance: Equipment List
6. Emergency Equipment
 - A. ELT
 - B. Fire Extinguisher

COMPLETION STANDARDS:

The student should be familiar with flight operations policies and procedures, have a flight record created, and understand course completion requirements.

2.2 - LESSON 2: FLIGHT BY REFERENCE TO INSTRUMENTS - PART 1

(Dual: 1.6 Hours, Simulated Instrument: 1.4 Hours, Pre/Post Flight Briefings: 0.8 Hours)

OBJECTIVES:

This is the initial instrument orientation flight. Familiarization with the helicopter, preflight preparation, preflight procedures, use of checklists, and safety of flight will be conducted. The student will be introduced to the fundamentals using visual and instrument references while using a view-limiting device.

CONTENTS:

1. Obtain weather briefing, preflight of aircraft and required systems for instrument flight
2. Instrument cockpit checks
3. Use of checklists
4. Straight and level flight, climbs, turns and descents by use of the performance method
5. Demonstrate instrument approach
6. Post flight procedures - checking instruments and equipment

COMPLETION STANDARDS:

This lesson will be considered complete when the student by oral examination demonstrates an understanding of the process to be used for every flight including; proper preflight preparation, preflight procedures and use of the checklist.

Furthermore, the student will be able to explain the concept of the performance method and its application in instrument flying.

2.3 - LESSON 3: FLIGHT BY REFERENCE TO INSTRUMENTS - PART 2

(Simulator: 1.8 Hours, Simulated Instrument: 1.3 Hours, Pre/Post Flight Briefings: 0.8 Hours)

OBJECTIVES:

To further expose the student to basic flight maneuvers by reference to the flight instruments including climbs, descents, standard rate turns and climbing turns and descents while using a view-limiting device.

Introduce the student to air traffic control clearances and procedures by demonstrating a request for vectors to final for an approach in a simulator, which will be flown without a view-limiting device.

**Only the instrument approach portion of the flight will be done without the use of a view limiting device. Instructors must ensure appropriate simulated instrument time has been logged due to the lesson being partially flown under simulated conditions.*

CONTENTS:

7. Preflight of aircraft and required systems for instrument flight
8. Instrument cockpit checks
9. Flight by reference to instruments; straight and level flight, climbs, descents and standard rate turns
10. Air traffic control clearances & procedures: Vectors to final for an ILS approach
11. Fly approach without view-limiting device
12. Post flight procedures - checking instruments and equipment

COMPLETION STANDARDS:

The student will be able to perform the proper preflight preparation and procedures unaided and by reference to instruments, be able to maintain altitude within 200 feet and headings within 20 degrees.

2.4 - LESSON 4: FLIGHT BY REFERENCE TO INSTRUMENTS - PART 3

(Simulator: 1.6 Hours, Simulated Instrument: 1.4 Hours, Pre/Post Flight Briefings: 0.8 Hours)

OBJECTIVES:

Familiarize the student with filing an IFR flight plan consisting of a cross-country flight to include a VOR and ILS approach, which will be performed with a view-limiting device.

CONTENTS:

13. Preflight of aircraft and required systems for instrument flight
14. Demonstrate how to File an IFR flight plan
15. Perform IFR cross-country by vectors
16. Perform VOR and ILS approaches
17. Post flight procedures

COMPLETION STANDARDS:

The student will be able to describe the process by which an IFR flight plan is filed, communicate and comply with air traffic control clearances with the assistance of the instructor and maintain altitude within 200 feet and heading within 20 degrees without the intervention of the instructor.

2.5 - LESSON 5: AIR TRAFFIC CONTROL CLEARANCES & PROCEDURES

(Dual/XC: 1.9 Hours, Simulated Instrument: 1.7 Hours, Pre/Post Flight Briefings: 0.8 Hours)

OBJECTIVES:

Familiarize the student with filing an IFR flight plan consisting of a cross-country flight to include a VOR and ILS approach, which will be performed with a view-limiting device.

CONTENTS:

1. Preflight of aircraft and required systems for instrument flight
2. Demonstrate how to File an IFR flight plan
3. Perform IFR cross-country by vectors
4. Perform VOR and ILS approaches
5. Post flight procedures

COMPLETION STANDARDS:

The student will be able to describe the process by which an IFR flight plan is filed, communicate and comply with air traffic control clearances with the assistance of the instructor and maintain altitude within 200 feet and heading within 20 degrees without the intervention of the instructor.

2.6 - LESSON 6: NAVIGATION SYSTEMS - PART 1

(Dual/XC: 1.6 Hours, Simulated Instrument: 1.4 Hours, Pre/Post Flight Briefings: 0.8 Hours)

OBJECTIVES:

To expose the student to programming the GPS as a means of navigation and perform a cross-country flight by use of a GPS Navigation System to include a GPS and ILS approach.

CONTENTS:

1. Preflight of aircraft and required systems for instrument flight
2. Perform a cross-country based on GPS based navigation
3. Perform a GPS and ILS approach
4. Post flight procedures

COMPLETION STANDARDS:

The student will be able to describe the process by which a destination is loaded into the GPS and successfully navigate a cross-country flight without the intervention of the instructor.

While enroute the student will be able to maintain altitude by 200 feet, heading by 20 degrees and within full-scale deflection on the CDI.

2.7 - LESSON 7: NAVIGATION SYSTEMS - PART 2

(Dual/XC: 1.6 Hours, Simulated Instrument: 1.4 Hours, Pre/Post Flight Briefings: 0.8 Hours)

OBJECTIVES:

To expose the student to navigating, intercepting and tracking by use of the VOR and perform a cross-country flight to include a VOR and ILS approach.

CONTENTS:

5. Preflight of aircraft and required systems for instrument flight
6. Perform a cross-country based on GPS/VOR navigation
7. Perform a GPS and Localizer approach
8. Post flight procedures

COMPLETION STANDARDS:

The student will be able to describe the process of intercepting, tracking and navigating using the VOR and successfully navigate a cross-country flight without the intervention of the instructor. While en-route the student will be able to maintain altitude by 200 feet, heading by 20 degrees and within full-scale deflection on the CDI.

2.8 - LESSON 8: NAVIGATION SYSTEMS - PART 3

(Simulator: 1.6 Hours, Simulated Instrument: 1.4 Hours, Pre/Post Flight Briefings: 0.8 Hours)

OBJECTIVES:

The student will continue to increase their proficiency in intercepting and tracking a radial to a VOR. Additionally, the student will be introduced to holding and DME Arcs.

CONTENTS:

9. Preflight of aircraft and required systems for instrument flight
10. Checklist procedures
11. Radio communications
12. DME Arc
13. Intercepting and tracking
14. Holding
15. Back course approach
16. Post flight procedures

COMPLETION STANDARDS:

During the post-flight briefing the student will be able to describe the procedures associated with holding and DME Arc's and will have maintained altitude within 150 feet, heading within 15 degrees and within $\frac{3}{4}$ scale deflection on the CDI.

2.9 - LESSON 9: INSTRUMENT APPROACH PROCEDURES - PART 1

(Simulator: 1.6 Hours, Simulated Instrument 1.4 Hours, Pre/Post Flight Briefings: 0.8 Hours)

OBJECTIVES:

The student will be exposed to instrument approach procedures including loading and setting up the approach into the GPS and providing an approach briefing as well as working with Air Traffic Control to continue to improve radio communication skills.

CONTENTS:

1. Preflight of aircraft and required systems for instrument flight
2. Checklist procedures
3. Radio communications
4. Loading the selected approach(s) (approach type chosen by instructor)
5. Instrument approach
6. Missed approach
7. Instrument approach and landing
8. Post flight procedures

COMPLETION STANDARDS:

The student, with the assistance of the instructor, will be able to load and set up the desired approach into the GPS as well as provide approach briefings. While on the approach the student will maintain altitude within 150 feet, heading within 15 degrees and within $\frac{3}{4}$ scale deflection on the CDI.

2.10 - LESSON 10: INSTRUMENT APPROACH PROCEDURES - PART 2

(Dual: 1.6 Hours, Simulated Instrument: 1.4 Hours, Pre/Post Flight Briefings: 0.8 Hours)

OBJECTIVES:

The student, with minimal assistance from the instructor will load the selected approaches and provide the relative approach briefings and communicate and comply with Air Traffic control direction.

While on the approach accuracy in both desired heading and altitude will continue to improve as well as the ability of the student to independently adhere to proper procedure.

CONTENTS:

9. Preflight of aircraft and required systems for instrument flight
10. Checklist procedures
11. Radio communications
12. Loading the selected approach(s) (approach type chosen by instructor)
13. Instrument approach
14. DME Arc
15. Instrument approach and landing
16. Post flight procedures

COMPLETION STANDARDS:

The student, with minimal assistance from the instructor, will be able to load and set up the desired approach into the GPS as well as provide approach briefings. The student will maintain altitude within 150 feet, heading within 15 degrees and within $\frac{3}{4}$ scale deflection on the CDI.

2.11 - LESSON 11: INSTRUMENT APPROACH PROCEDURES - PART 3

(Dual: 1.6 Hours, Simulated Instrument: 1.4 Hours, Pre/Post Flight Briefings: 0.8 Hours)

OBJECTIVES:

The student will load the selected approaches and provide the relative approach briefings and communicate and comply with Air Traffic control direction.

While on the approach accuracy in both desired heading and altitude will continue to improve as well as the ability of the student to independently adhere to proper procedure.

CONTENTS:

17. Preflight of aircraft and required systems for instrument flight
18. Checklist procedures
19. Radio communications
20. Loading the selected approach(s) (approach type chosen by instructor)
21. Instrument approach
22. DME Arc
23. Instrument approach and landing
24. Post flight procedures

COMPLETION STANDARDS:

The student, without assistance of the instructor, will be able to load and set up the desired approach into the GPS as well as provide approach briefings. The student will maintain altitude within 150 feet, heading within 15 degrees and within $\frac{3}{4}$ scale deflection on the CDI.

2.12 - LESSON 12: INSTRUMENT STAGE ONE CHECK

(Dual: 1.6 Hours, Simulated Instrument: 1.4 Hours, Pre/Post Flight Briefings: 1.0 Hours)

OBJECTIVES:

To determine student progress in flight skills and procedural knowledge with regards to Preflight Preparation, Preflight Procedures, Air Traffic Control Clearances & Procedures, Flight by Reference to Instruments, Navigation Systems and Instrument Approach Procedures.

CONTENTS:

1. Preflight of aircraft and required systems for instrument flight
2. Checklist procedures
3. Radio communications
4. Loading the selected approach(s) (approach type chosen by instructor)
5. Instrument approach
6. Missed approach
7. DME Arc
8. Holding, intercepting and tracking
9. Instrument approach and landing
10. Post flight procedures

COMPLETION STANDARDS:

To pass the Stage One Stage Check, the student will maintain altitude within 150 feet, heading within 15 degrees and within $\frac{3}{4}$ scale deflection on the CDI.

SECTION 3 - STAGE TWO FLIGHT TRAINING

OBJECTIVES:

The primary objective during Stage Two is to refine instrument flying techniques and methods. The student will receive instruction on *Instrument Procedures, En-route Procedures, and Inflight Emergencies*. The student must develop the proficiency for their check ride using Instrument Airman Certification Standards (ACS).

Each student must review the assignment for the scheduled flight lesson prior to arriving for training.

REFERENCES:

1. The Semper Fly Helicopters Training Syllabus for the Instrument Pilot Rotorcraft / Helicopter Certification Course
2. The Semper Fly Helicopters Private / Commercial Study Guide
3. Guimbal Cabri G2 Flight Manual
4. Guimbal Cabri G2 Flight Instructor Guide
5. The FAR/AIM Manual
6. Aeronautical Decision Making for Pilots
7. Instrument Rating – Helicopter Airman Certification Standards, FAA-S-ACS-14
8. Instrument Flying Handbook, FAA-H-8083-15B
9. Instrument Procedures Handbook, FAA-H-8261-1A
10. Helicopter Pilot Textbook. Jeppesen Sanderson, Inc.
11. Risk Management Handbook, FAA-H-8083-2

COMPLETION STANDARDS:

The student, upon completion of the lesson contained in this stage can demonstrate through a Stage Check flight that he or she can meet or exceed the Airman Certification Standards 100% of the time.

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3.3 - Lesson 3: Emergency Procedures **	1.7		0.8	3-5
3.4 - Lesson 4: Instrument Approach Procedures **	1.7		0.8	3-6
3.5 - Lesson 5: Instrument Approach Procedures	1.6		0.8	3-7
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3.8 - Lesson 8: Instrument Approach Procedures	1.6		0.8	3-10
3.9 - Lesson 9: Instrument Approach Procedures	1.6		0.8	3-11
3.10 - Lesson 10: Long File Cross-Country	2.8	2.8	0.8	3-12
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3.12 - Lesson 12: Instrument Approach Procedures	1.6		0.8	3-14
3.13 - Lesson 13: Instrument Approach Procedures	1.6		0.8	3-15
3.14 - Lesson 14: Instrument Approach Procedures	1.6		0.8	3-16
3.15 - Lesson 15: Instrument Final Stage Check	2.0		1.0	3-17
FLIGHT STAGE TWO - TOTAL HOURS	25.6	2.8	12.2	

**** Lesson to be completed in the simulator**

TOTAL FLIGHT / SIM HOURS STAGE TWO: 25.6

MINIMUM SIMULATED INSTRUMENT (HOOD) TIME: 22.6

3.1 - LESSON 1: EMERGENCY PROCEDURES

(Dual: 1.4 Hours, Simulated Instrument: 1.4 Hours, Pre/Post Flight Briefings: 0.8 Hours)

OBJECTIVES:

The student will be introduced to simulated adverse conditions to help the student learn to manage the potential variables while maintaining positive aircraft control and situational awareness. This lesson will focus on diversion techniques as well as how to properly recover from an unusual attitude.

CONTENTS:

1. Preflight of aircraft and required systems for instrument flight
2. Checklist procedures
3. Simulate diversion techniques for an Inadvertent Thunderstorm Encounter
4. Simulate diversion techniques for an Inadvertent Icing Encounter
5. Unusual Attitudes
6. Fly an ILS Approach
7. Post flight procedures

COMPLETION STANDARDS:

The student will be able to demonstrate the proper diversion technique associated with the simulated emergency without the assistance of the instructor as well as demonstrate an ability to recover from an unusual attitude. The student will maintain altitude within 100 feet, heading within 10 degrees and within $\frac{3}{4}$ scale deflection on the CDI.

3.2 - LESSON 2: EMERGENCY PROCEDURES

(Dual: 1.6 Hours, Simulated Instrument: 1.4 Hours, Pre/Post Flight Briefings: 0.8 Hours)

OBJECTIVES:

The student will learn how to overcome gyro instrument and pitot/static instrument malfunctions while in flight by use of proper partial panel techniques.

CONTENTS:

1. Preflight of aircraft and required systems for instrument flight
2. Checklist procedures
3. Simulated Gyro Instrument Malfunction (Straight & Level, Turns & Descents)
4. Simulated Pitot/Static Malfunction (Straight & Level, Turns & Descents)
5. Instrument approach under partial panel conditions
6. Post flight procedures

COMPLETION STANDARDS:

The student, under partial panel conditions will be able to maintain altitude within 100 feet, heading within 10 degrees and within $\frac{3}{4}$ scale deflection on the CDI.

3.3 - LESSON 3: EMERGENCY PROCEDURES

(Simulator: 1.6 Hours, Simulated Instrument: 1.4 Hours, Pre/Post Flight Briefings: 0.8 Hours)

OBJECTIVES:

The student will further increase and demonstrate their ability to confidently maintain aircraft control and situational awareness while on approach under partial panel conditions.

CONTENTS:

1. Preflight of aircraft and required systems for instrument flight
2. Checklist procedures
3. Simulated Gyro Instrument Malfunction (Approach under partial panel conditions)
4. Simulated Pitot/Static Malfunction (Approach under partial panel conditions)
5. Post flight procedures

COMPLETION STANDARDS:

The student, under partial panel conditions will be able to maintain altitude within 100 feet, heading within 10 degrees and within $\frac{3}{4}$ scale deflection on the CDI.

3.4 - LESSON 4: INSTRUMENT APPROACH PROCEDURES

(Simulator: 1.6 Hours, Simulated Instrument: 1.4 Hours, Pre/Post Flight Briefings: 0.8 Hours)

OBJECTIVES:

The student will further develop their ability to maintain aircraft control and situational awareness during the approach phase of flight.

CONTENTS:

1. Aircraft and instrument preflight inspection
2. Checklist procedures
3. Radio communications
4. Departure procedures
5. Intercept and holding practice
6. Instrument approach
7. Missed approach
8. Instrument approach to landing
9. Post flight procedures

COMPLETION STANDARDS:

The student will be able to maintain altitude within 100 feet, heading within 10 degrees and within $\frac{3}{4}$ scale deflection on the CDI.

3.5 - LESSON 5: INSTRUMENT APPROACH PROCEDURES

(Dual: 1.6 Hours, Simulated Instrument: 1.4 Hours, Pre/Post Flight Briefings: 0.8 Hours)

OBJECTIVES:

The student will further develop their ability to maintain aircraft control and situational awareness during the approach phase of flight.

CONTENTS:

1. Aircraft and instrument preflight inspection
2. Checklist procedures
3. Radio communications
4. Departure procedures
5. Intercept and holding practice
6. Instrument approach
7. DME Arc
8. Instrument approach to landing
9. Post flight procedures

COMPLETION STANDARDS:

The student will be able to maintain altitude within 100 feet, heading within 10 degrees and within $\frac{3}{4}$ scale deflection on the CDI.

3.6 - LESSON 6: INSTRUMENT APPROACH PROCEDURES

(Dual: 1.6 Hours, Simulated Instrument: 1.4 Hours, Pre/Post Flight Briefings: 0.8 Hours)

OBJECTIVES:

The student will further develop their ability to maintain aircraft control and situational awareness during the approach phase of flight.

CONTENTS:

1. Aircraft and instrument preflight inspection
2. Checklist procedures
3. Radio communications
4. DME Arc
5. Intercept and holding practice
6. Instrument approach
7. Missed approach
8. Instrument approach to landing
9. Post flight procedures

COMPLETION STANDARDS:

The student will be able to maintain altitude within 100 feet, heading within 10 degrees and within $\frac{3}{4}$ scale deflection on the CDI.

3.7 - LESSON 7: INSTRUMENT APPROACH PROCEDURES

(Dual: 1.6 Hours, Simulated Instrument: 1.4 Hours, Pre/Post Flight Briefings: 0.8 Hours)

OBJECTIVES:

The student will further develop their ability to maintain aircraft control and situational awareness during the approach phase of flight.

CONTENTS:

1. Aircraft and instrument preflight inspection
2. Checklist procedures
3. Radio communications
4. DME Arc
5. Intercept and holding practice
6. Instrument approach
7. Missed approach
8. Instrument approach to landing
9. Post flight procedures

COMPLETION STANDARDS:

The student will be able to maintain altitude within 100 feet, heading within 10 degrees and within $\frac{3}{4}$ scale deflection on the CDI.

3.8 - LESSON 8: INSTRUMENT APPROACH PROCEDURES

(Dual: 1.6 Hours, Simulated Instrument: 1.4 Hours, Pre/Post Flight Briefings: 0.8 Hours)

OBJECTIVES:

The student will further develop their ability to maintain aircraft control and situational awareness during the approach phase of flight.

CONTENTS:

1. Aircraft and instrument preflight inspection
2. Checklist procedures
3. Radio communications
4. DME Arc
5. Intercept and holding practice
6. Instrument approach
7. Missed approach
8. Instrument approach to landing
9. Post flight procedures

COMPLETION STANDARDS:

The student will be able to maintain altitude within 100 feet, heading within 10 degrees and within $\frac{3}{4}$ scale deflection on the CDI.

3.9 - LESSON 9: INSTRUMENT APPROACH PROCEDURES

(Dual: 1.6 Hours, Simulated Instrument: 1.4 Hours, Pre/Post Flight Briefings: 0.8 Hours)

OBJECTIVES:

The student will further develop their ability to maintain aircraft control and situational awareness during the approach phase of flight.

CONTENTS:

1. Aircraft and instrument preflight inspection
2. Checklist procedures
3. Radio communications
4. DME Arc
5. Intercept and holding practice
6. Instrument approach
7. Missed approach
8. Instrument approach to landing
9. Post flight procedures

COMPLETION STANDARDS:

The student will be able to maintain altitude within 100 feet, heading within 10 degrees and within $\frac{3}{4}$ scale deflection on the CDI.

3.10 - LESSON 10: LONG FILE CROSS-COUNTRY

(Dual/XC: 2.8 Hours, Simulated Instrument: 2.6 Hours, Pre/Post Flight Briefings: 0.8 Hours)

OBJECTIVES:

The student will provide a cross-country flight plan to be flown under IFR meeting the requirements of FAR 141 Appendix C in a helicopter consisting of a distance of at least 100 NM along airways or under the direction of ATC-directed routing with one segment of the flight consisting of a straight line distance of at least 50 NM between airports and involves an instrument approach at each airport and three different kinds of approaches with the use of navigation aids.

The student will file and fly the IFR flight plan pursuant to 14 CFR Appendix C to Part 141 4(c)(2)

CONTENTS:

1. Aircraft and instrument preflight inspection
2. File IFR Flight Plan
3. Checklist procedures
4. Radio communications
5. Fly filed flight plan
6. Post flight procedures

COMPLETION STANDARDS:

The student must perform three different types of approaches by use of navigation and at least one approach must be a precision approach. ASR and PAR approaches may not be used as substitutes. The student will be able to maintain altitude within 100 feet and heading within 10 degrees and within $\frac{3}{4}$ scale deflection on the CDI.

3.11 - LESSON 11: INSTRUMENT APPROACH PROCEDURES

(Dual: 1.6 Hours, Simulated Instrument: 1.4 Hours, Pre/Post Flight Briefings: 0.8 Hours)

OBJECTIVES:

The student will further develop their ability to maintain aircraft control and situational awareness during the approach phase of flight. Approach under partial panel conditions needed.

CONTENTS:

1. Aircraft and instrument preflight inspection
2. Checklist procedures
3. Radio communications
4. Departure procedures
5. Intercept and holding practice
6. Instrument approach
7. DME Arc
8. Instrument approach to landing
9. Post flight procedures

COMPLETION STANDARDS:

The student will be able to maintain altitude within 75 feet, heading within 5 degrees and within ½ scale deflection on the CDI.

3.12 - LESSON 12: INSTRUMENT APPROACH PROCEDURES

(Dual: 1.6 Hours, Simulated Instrument: 1.4 Hours, Pre/Post Flight Briefings: 0.8 Hours)

OBJECTIVES:

The student will further develop their ability to maintain aircraft control and situational awareness during the approach phase of flight. Approach under partial panel conditions.

CONTENTS:

1. Aircraft and instrument preflight inspection
2. Checklist procedures
3. Radio communications
4. Departure procedures
5. Intercept and holding practice
6. Instrument approach
7. Missed approach
8. Instrument approach to landing
9. Post flight procedures

COMPLETION STANDARDS:

The student will be able to maintain altitude within 75 feet, heading within 5 degrees and within ½ scale deflection on the CDI.

3.13 - LESSON 13: INSTRUMENT APPROACH PROCEDURES

(Dual: 1.6 Hours, Simulated Instrument: 1.4 Hours, Pre/Post Flight Briefings: 0.8 Hours)

OBJECTIVES:

The student will further develop their ability to maintain aircraft control and situational awareness during the approach phase of flight.

CONTENTS:

1. Aircraft and instrument preflight inspection
2. Checklist procedures
3. Radio communications
4. DME Arc
5. Intercept and holding practice
6. Instrument approach
7. Missed approach
8. Instrument approach to landing
9. Post flight procedures

COMPLETION STANDARDS:

The student will be able to maintain altitude within 75 feet, heading within 5 degrees and within ½ scale deflection on the CDI.

3.14 - LESSON 14: INSTRUMENT APPROACH PROCEDURES

(Dual: 1.6 Hours, Simulated Instrument: 1.4 Hours, Pre/Post Flight Briefings: 0.8 Hours)

OBJECTIVES:

The student will demonstrate their ability to maintain aircraft control and situational awareness during all phases of instrument flight. The CFI will verify that all required approaches have been taught during the course of training and that the student is ready for the final stage check.

CONTENTS:

1. Aircraft and instrument preflight inspection
2. Checklist procedures
3. Aircraft Flight Instruments and Navigation Equipment
4. Instrument Cockpit Check
5. Air Traffic Control Clearances
6. Compliance With Departure, En-route, Arrival Procedures and Clearances
7. Basic Instrument Flight Maneuvers
8. Recovery From Unusual Flight Attitudes
9. Intercepting and Tracking Navigational Systems & DME Arcs
10. Non-precision Approach
11. Precision Approach
12. Missed Approach
13. Landing From a Straight-in Approach
14. Loss of Communications
15. Approach With Loss of Primary Flight Instrument Indicators
16. Checking Instruments & Equipment

COMPLETION STANDARDS:

The student will be ready to take the final stage check.

3.15 - LESSON 15: INSTRUMENT FINAL STAGE CHECK

(Dual: 2.0 Hours, Simulated Instrument: 1.8 Hours, Oral Examination: 1.0 Hours)

OBJECTIVES:

Using the Rotorcraft/Helicopter Instrument Pilot ACS to dictate tasks to be performed, the Stage Check Instructor will assess the student's ability to exceed the ACS standards.

CONTENTS:

1. Preflight Preparation
 - A. Pilot Qualifications
 - B. Weather Information
 - C. Cross-Country Flight Planning
2. Preflight Procedures
 - A. Aircraft Systems Related to Instrument Flight Rules (IFR) Operations
 - B. Helicopter Flight Instruments and Navigation Equipment
 - C. Instruments Flight Deck Check
3. Air Traffic Control (ATC) Clearances and Procedures
 - A. Compliance with Air Traffic Control Clearances
 - B. Holding Procedures
4. Flight by Reference to Instruments
 - A. Instrument Flight
 - B. Recovery from Unusual Attitudes
5. Navigation Systems
 - A. Intercepting and Tracking Navigational Systems and DME Arcs
 - B. Departure, En Route, and Arrival Operations
6. Instrument Approach Procedures
 - A. Non-precision Approach
 - B. Precision Approach
 - C. Missed Approach
 - D. Landing from an Instrument Approach
7. Emergency Operations
 - A. Loss of Communications
 - B. Approach with Loss of Primary Flight Instrument Indicators
8. Postflight Procedures
 - A. Checking Instruments and Equipment

COMPLETION STANDARDS:

The student will demonstrate adequate knowledge on the ground topics covered and will maintain an altitude within 75 feet, heading within 5 degrees during the flight and within ½ scale deflection on the CDI.