Gold Seal

INSTRUMENT PILOT SYLLABUS

Flight Training



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Gold Seal

Instrument Pilot Syllabus
Flight Training

Airplane - Single or Multi-Engine

First Edition

Meets Part 61 and 141 Flight Training Requirements
14 CFR 141, Appendix C - Instrument Rating Course

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Record of Revisions

Revision Procedures - Revisions will be made to the syllabus when Gold Seal Ground School determines that an amendment, an addition, or a deletion is necessary for clarity, currency, comprehensiveness, or compliance with FAA directives. These revisions will be denoted with a major numerical change (e.g. 1.0 to 2.0). Revisions to this commercially produced syllabus will be sent to AFS-810 for a revised acceptance letter.

All revised pages will include the revision number in the bottom right margin. The date of the revision will be recorded in the revision record, which serves as a chronological reference. The revision table will include a revision number, effective date, affected pages, and a brief description of the revision.

A written explanation or other guidance will accompany each revision submitted to the FAA for approval and subsequently disseminated back to the TCO holder. TCO holders utilizing this syllabus as part of an FAA approved training course must submit a request to their Flight Standards District Office (FSDO) and receive approval prior to using any revised material.

Minor updates or editorial changes (e.g. grammatical or supplemental amendments to the course) will be noted on the affected page with a minor numerical change (e.g. 1.0 to 1.1). These changes will not require FAA approval; however, Gold Seal will provide a description of these changes to TCO holders.

Revision Number	Effective Date	Affected Pages(s)	Description
1.0 (Original)	1 Aug 2024		

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Welcome to the Gold Seal Instrument Rating Flight Training Course

Welcome aboard the Gold Seal Instrument Rating Flight Training Course! We are thrilled to have you join us on this remarkable journey towards advancing your skills as an instrument-rated pilot. This training marks the application of your knowledge and the furthering of your adventure in aviation. We are here to support you every step of the way as you bring your aspirations to life.

This course is designed to accommodate training conducted under either Part 61 or Part 141 of the Federal Aviation Administration (FAA) regulations. Whether you are pursuing a structured, school-based program or a more flexible, self-paced approach, our syllabus is adaptable to meet your needs.

We recognize that the path towards becoming an instrument-rated pilot is both thrilling and challenging. The instructors and staff at your flight school will be your primary means of support, providing the guidance and expertise you need as you progress through your training. Additionally, if you are utilizing the Gold Seal Ground School, our dedicated team of instructors and support staff are also available to assist you in navigating your journey. Our goal is to ensure that you have all the resources and support necessary for your success.

With your determination and our combined expertise, success is within your grasp. We are excited to be part of your aviation journey.

Course Objective

The objective of this Gold Seal Instrument Rating Flight Training Syllabus is to equip learners with the comprehensive aeronautical experience essential for obtaining the **FAA Instrument Rating in the Airplane Category**. Our structured training approach meets the flight experience requirements while emphasizing the practical application of these skills in real-world flying scenarios. The course is thoughtfully designed to not only meet the total aeronautical experience training hours required but also to foster real-world piloting skills. By the end of this course, learners will be prepared to excel on their FAA practical test and, more importantly, to become proficient, knowledgeable, confident, and safe instrument-rated pilots in the aviation community.

Requirements to Earn Your Instrument Rating

Embarking on the path to earning your instrument rating is an exciting and rewarding journey. To achieve this goal, there are specific requirements that you must meet, as outlined by the FAA. These requirements ensure that you possess the necessary knowledge, skills, and physical ability to safely operate an aircraft:

- **Language Proficiency:** You must be able to read, speak, and understand the English language. This proficiency is vital for effective communication and understanding of aviation regulations and procedures.
- **Ground Training:** Learners must complete the required ground school training, which provides the necessary aeronautical knowledge in accordance with either Part 61 or Part 141 regulations, depending on the specific training program being followed.
- **Flight Experience:** Learners must accomplish the flight time and aeronautical experience requirements specified under either Part 61 or Part 141 regulations, depending on the specific training program being followed.

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- **FAA Airman Knowledge Exam:** Successfully pass the FAA Airman Knowledge Exam for the Instrument Rating-Airplane (IRA) with a score of 70% or better.
- **Instructor Endorsements:** Receive the necessary endorsements from your Certificated Flight Instructor-Instrument (CFII). These endorsements confirm that you have met the training requirements and are prepared for the practical test.
- **Practical Test:** Pass a practical test, which includes both an oral examination and a flight evaluation. This test assesses your ability to apply your knowledge and demonstrate your flying skills.

Meeting these requirements is a significant accomplishment providing you with the freedom and responsibility of being an instrument-rated pilot. As you progress through your training, remember that each requirement is designed to build your competence and confidence in the flight deck, ensuring you are ready to take on the skies.

Enrollment Prerequisites

Flight Training Prerequisites: This syllabus covers flight training for the Instrument Rating-Airplane. As you prepare for the practical aspect of becoming a pilot, there are a few key prerequisites for enrolling in an instrument rating flight training certification course. Your flight school may have additional enrollment requirements.

1. **Citizenship Verification:** Before commencing flight training, you must verify your citizenship with your flight school or Certificated Flight Instructor (CFI), who will provide a citizenship verification endorsement. Non-USA citizens will need to undergo a security threat assessment through the Flight Training Security Program. This process is a standard security measure in aviation training required by the Transportation Security Administration (TSA). Your CFI or flight school can provide you with a list of documents accepted by the TSA for this purpose.
2. **Language Proficiency:** You must be able to read, speak, and understand the English language. This proficiency is vital for effective communication and understanding of aviation regulations and procedures.
3. **Medical Examination:** Learners are required to pass a third-class medical exam conducted by an Aviation Medical Examiner (AME) or operate under BasicMed.
4. **Pilot Certificate:** Learners must hold at least a private pilot certificate with an airplane category and the class appropriate to the rating sought.

How to Complete the Course: A Guide to Success in Flight Training

This syllabus is designed to guide you through the flight training toward earning your instrument rating. The course is structured into four stages, each containing multiple lessons that progressively build from basic to advanced instrument flight skills. These lessons ensure a solid foundation and a gradual build-up of expertise, preparing you for every aspect of instrument flying. The stages are as follows:

Stage 1 - Basic Instrument Skills: Stage 1 focuses on developing fundamental instrument flying skills. You will learn to maintain and adjust aircraft attitude solely by reference to instruments, handle partial-panel scenarios, and perform instrument flight patterns and procedure turns. This stage ends with a Stage One Check to ensure you have mastered these essential skills.

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Stage 2 - Navigation and Holding Procedures: Stage 2 aims to enhance your navigation skills using various systems, including VOR, GPS, and DME. You will practice advanced navigation techniques, such as DME arcs and holding patterns, both standard and nonstandard. This stage concludes with a Stage Two Check to confirm your proficiency in navigation and holding procedures.

Stage 3 - Instrument Procedures: Stage 3 is dedicated to mastering instrument approach procedures using different navigation aids, including VOR, localizer, ILS, GPS, and radar-based approaches. You will also learn and practice departure and arrival procedures. This stage involves comprehensive reviews and culminates in a Stage Three Check to ensure readiness for advanced instrument flying.

Stage 4 - Cross-Country and Advanced Procedures: Stage 4 focuses on cross-country planning and execution under IFR conditions, emergency procedures, and comprehensive skill reviews. You will conduct a dual IFR cross-country training flight and practice handling various in-flight scenarios. This stage ends with a Stage Four Check and a mock checkride to prepare you for the FAA practical test.

Lesson Format: Each flight lesson typically includes the following components:

- **Preflight Briefing:** Each flight lesson begins with a preflight briefing by your instructor, who will first assess your preparation and readiness for the upcoming lesson. This session addresses any questions from the previous lesson and outlines the objectives, specific maneuvers, expected actions, and completion standards for the flight. Additionally, the briefing covers key knowledge areas, risk management considerations, and essential skills, all aligned with the FAA Airman Certification Standards (ACS). This detailed briefing ensures you are well-prepared and confident before taking to the skies.

- **Flight Portion:** During this segment, you will engage in practical flight training, executing the maneuvers discussed in the preflight briefing. Your instructor may incorporate maneuvers from previous lessons into the flight, allowing you to demonstrate and reinforce these skills within the context of the current lesson before introducing new techniques. This continuous practice ensures a solid grasp of essential skills while building proficiency. The length of each lesson can vary depending on the specific content and objectives, providing the necessary time to effectively cover all required maneuvers and activities.

- **Postflight Debrief:** After each flight lesson, your instructor will conduct a comprehensive postflight debrief. This is designed to review your performance during the flight, highlighting strengths and identifying areas for improvement. The instructor will provide detailed feedback on how to correct any issues observed and reinforce the successful aspects of your performance. During the debrief you should also conduct a self-assessment where you reflect on your own performance and ask questions. Additionally, your instructor will preview the objectives and maneuvers for the next lesson, ensuring you are well-prepared for future training.

Learner Preparation: To ensure you get the most out of each flight lesson, it is essential to arrive prepared and ready to learn. Dedicating time to review recommended or required lesson resources and completing any assignments from your flight instructor or flight school will greatly enhance your learning experience. Proper preparation allows you to maximize the benefits of your time in the air, making each flight session more productive and enjoyable. By arriving well-prepared, you can focus on honing your skills and advancing steadily towards your goal of becoming an instrument-rated pilot.

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Concurrent or Sequential Training Design: This flight syllabus is designed to accommodate flight training either concurrently with ground training or after the completion of ground training. For optimal learning, it is highly recommended that learners complete most, if not all, of their ground training before beginning flight training. Having a solid foundation in the concepts and theories covered in ground school enhances understanding and application during practical flight training. This approach ensures that learners are well-prepared and can make the most of their flight training experience, leading to more effective and efficient skill development.

Description of the Checks and Tests to Measure Learner Accomplishments

Stage Checks: Throughout the course, you will undergo stage checks designed to evaluate your progress and ensure you have acquired the necessary knowledge and skills for each phase of training. These evaluations are conducted at the end of each stage. During these checks, a qualified instructor will assess your proficiency in the maneuvers and procedures specific to that stage, as well as your overall readiness to proceed to the next stage. The stage checks must be administered by a qualified check instructor in accordance with 14 CFR 141.37, ensuring that you meet the FAA standards.

End-of-Course Test: The final assessment in the syllabus is the End-of-Course Test. This comprehensive evaluation ensures you are fully prepared for the FAA practical test. A qualified instructor will conduct a thorough review of your skills, including all required maneuvers and procedures. The test aims to confirm that you have met the proficiency standards necessary to operate safely and competently as an instrument-rated pilot. This test must be administered by a qualified check instructor, as specified in 14 CFR 141.37.

Graduation Requirements

To graduate from the Instrument Rating Flight Training Course, learners must fulfill specific requirements that vary slightly depending on whether they are training under part 141 or part 61 regulations.

Part 141 Learners:

- **Aeronautical Knowledge (Ground Training):** Complete at least 30 hours of aeronautical knowledge training as prescribed in 14 CFR 141 Appendix C (3)(a)(1), and successfully pass the FAA Knowledge Test. This ground training is not covered by this syllabus; it must be completed in accordance with your flight school's Training Course Outline (TCO).
- **Aeronautical Experience (Flight Training):** Successfully complete all flight lessons as outlined in this syllabus and accumulate at least 35 hours of aeronautical experience, ensuring proficiency in all required maneuvers and procedures.
    - Instrument training time from a certificated flight instructor with an instrument rating on the approved areas of operation in 14 CFR 141 Appendix C(4)(c) including at least one cross-country flight that
        - Is in the category and class of airplane that the course is approved for, and is performed under IFR;
        - Is a distance of at least 250 nautical miles along airways or ATC-directed routing with one segment of the flight consisting of at least a straight-line distance of 100 nautical miles between airports;
        - Involves an instrument approach at each airport; and

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        - Involves three different kinds of approaches with the use of navigation systems.
- **Stage Checks and End-of-Course Test:** Pass all stage checks and the End-of-Course Test.
- **Graduation Certificate:** To earn your graduation certificate, you must meet all the aeronautical knowledge and experience requirements for the course. This certificate will be issued by the chief instructor, or an assistant chief instructor or recommending instructor delegated by the chief instructor, in accordance with 14 CFR 141.85. This certificate signifies that you have met all the requirements and are prepared to take the FAA practical test to obtain your Instrument Rating.

Part 61 Learners:

- **Aeronautical Knowledge (Ground Training):** While there are no minimum ground training time requirements under part 61, it is recommended to complete a thorough course of aeronautical knowledge training, similar to the 30-hour requirement under part 141, to ensure comprehensive understanding and preparation.
  Note: The Gold Seal Ground School Course provides a certificate attesting to your completion of a home-study course, meeting the aeronautical knowledge training requirement.
- **Aeronautical Experience (Flight Training):** Successfully complete all flight lessons as outlined in this syllabus, ensuring proficiency in all required maneuvers and procedures, including
    - 40 hours of actual or simulated instrument time in the areas of operation listed in 14 CFR 61.65(c), of which 15 hours must have been received from an authorized instructor who holds an instrument-airplane rating, and the instrument time includes:
        - 3 hours of instrument flight training from an authorized instructor in an airplane that is appropriate to the instrument-airplane rating within 2 calendar months before the date of the practical test; and
        - Instrument flight training on cross-country flight procedures, including one cross country flight in an airplane with an authorized instructor, that is performed under instrument flight rules, when a flight plan has been filed with an air traffic control facility, and that involves
            - A flight of 250 nautical miles along airways or by directed routing from an air traffic control facility;
            - An instrument approach at each airport; and
            - Three different kinds of approaches with the use of navigation systems.
    - Additionally, Part 61 learners must accumulate at least 50 hours of cross-country flight time as pilot in command, of which 10 hours must have been in an airplane.
- **Stage Checks and End-of-Course Test:** Although not mandatory under part 61, it is highly beneficial to undergo stage checks and an end-of-course test to ensure readiness for the FAA practical test.

FAA Practical Test: After meeting the required aeronautical knowledge and flight experience under either Part 141 or 61, you must successfully pass the FAA practical test to obtain your Instrument Rating.

Embark on this journey with us, where learning is not just about passing tests but becoming a skilled, knowledgeable, confident, and safe pilot ready to take on the skies!

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Required Materials

The resources below are required for course completion. To help learners prepare and understand new tasks in the syllabus, most lessons indicate several study resources, which contain important reference information about the required tasks. Resources are listed in the lessons by their acronym (e.g. GS=Gold Seal Ground School, IFH=FAA Instrument Flying Handbook). Many of these resources are available at no cost from the FAA.

- Gold Seal Instrument Pilot Ground School (GS)
- Gold Seal IFR Know It All Cheat Sheet
- Flight Computer (Manual E6B or Electronic)
- Federal Aviation Regulations (officially, the Code of Federal Regulations, i.e. 14 CFRs)
- Aeronautical Information Manual (AIM)
- Instrument Flying Handbook (IFH), FAA-H-8083-15B
  - Instrument Flying Handbook Errata Sheet
  - Instrument Flying Handbook Addendum
  - Instrument Flying Handbook Addendum B
- Instrument Procedures Handbook (IPH), FAA-H-8083-16B
- Instrument Rating - Airplane Airman Certification Standards (ACS), FAA-S-ACS-8B

Recommended Materials

While the resources below are not mandatory for course completion, we highly recommend a selection of supplementary materials to enrich your learning experience. These resources are available at no cost from the FAA, offering an invaluable supplement to your studies.

- Aeronautical Chart Users' Guide
- Airplane Flying Handbook (AFH), FAA-H-8083-3
- Pilot's Handbook of Aeronautical Knowledge (PHAK). FAA-H-8083-25
- Aviation Weather Handbook (AWH), FAA-H-8083-28
- Weight & Balance Handbook (WB), FAA-H-8083-1
- Risk Management Handbook (RMH), FAA-H-8083-2

Current FAA documents and handbook versions should be used for the most up-to-date information.

Digital syllabus viewers: *Click the underlined links above to download the FAA resources.*

Use of a Flight Simulator or Flight Training Device

Use of Flight Simulation Training Devices (FSTD): Applicants for the instrument rating can accomplish all or part of a practical test or proficiency check in an FSTD qualified under 14 CFR part 60, which includes full flight simulators (FFS) or flight training devices (FTD), only when conducted within an FAA-approved training program. Each operational rule part identifies additional requirements for the approval and use of FSTDs in an FAA-approved training program.

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Credit for Pilot Time in an FSTD: 14 CFR Part 61 and Part 141 specify the minimum experience requirements for each certificate or rating sought. 14 CFR Part 61 and the appendices to Part 141 specify the maximum amount of FFS or FTD flight training time an applicant can apply toward those experience requirements.

Use of Aviation Training Devices (ATD): Applicants for a pilot certificate or rating cannot use an ATD to accomplish a practical test, a 14 CFR Part 61, section 61.58 proficiency check, or the flight portion of a 14 CFR Part 61, section 61.57 flight review. An ATD is defined in 14 CFR Part 61, section 61.1.

The FAA's General Aviation and Commercial Division evaluates and approves ATDs as permitted under 14 CFR Part 61, section 61.4(c) and FAA Order 8900.1. Each ATD is then issued an FAA letter of authorization (LOA) that is valid for 60 calendar months. The LOA for each ATD lists the pilot time credit allowances and associated limitations.

The Pilot Training and Certification Group public website provides a list of the FAA-approved ATDs and the associated manufacturer.

Credit for Pilot Time in an ATD: 14 CFR Part 61 and Part 141 specify the minimum experience requirements for each certificate or rating sought. 14 CFR Part 61 and the appendices to Part 141 specify the maximum amount of ATD flight training time an applicant can apply toward those experience requirements. The LOA for each FAA-approved ATD lists the pilot time credit allowances and the associated limitations.

Evaluators must request an applicant to provide a copy of the manufacturer's LOA when using ATD flight training time credit to meet the minimum experience requirements for an airman pilot certificate, rating, or privilege.

Maximum training time limitations which may be credited toward the instrument rating:

Device	Part 141 % of course	Part 141 Hours	Part 61 Hours
FFS	50%	17.5	20.0
FTD	40%	14.0	20.0
AATD	40%	14.0	20.0
BATD	25%	8.75	10.0

For more details on using FSTDs and ATDs in training programs, refer to the Instrument Rating Airman Certification Standards and the applicable regulations:

- **FSTD**: 14 CFR 141.41(a) and 14 CFR Part 60.
- **ATD**: 14 CFR 141.41(b) and AC 61-136.

These lessons may not be completed in an FSTD or ATD:

- Stage 4, Lesson 26 (FSTD or ATD not permitted if lesson is conducted as a cross-country flight)
- Stage 4, Lesson 27

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Instrument Rating Flight Training Lessons

The Gold Seal Instrument Pilot Flight Training Course Syllabus is aligned with the standards set forth in 14 CFR 141, Appendix C - Instrument Rating Course. Presented below is a recommended timeline, detailing estimated completion times for each lesson to meet the aeronautical experience requirements. This schedule is provided as a guideline to assist both learners and instructors in planning and pacing the course effectively. Please note that these time estimates are not mandatory, but suggested durations.

Lesson	Lesson Title	Total	X/C	Instrument
1	Fundamentals of Instrument Flying	1.4		1.1
2	Partial-Panel Instrument Flying	1.5		1.2
3	Instrument Flight Patterns and Procedure Turns	1.5		1.2
4	Integrated Attitude Flying (Review)	1.3		1.0
5	Advanced Partial-Panel Flying	1.3		1.0
6	**Stage One Check**	1.6		1.3
7	VOR Navigation Techniques	1.3		1.0
8	GPS Navigation Techniques	1.3		1.0
9	Advanced GPS Navigation	1.3		1.0
10	DME Arcs	1.5		1.2
11	Holding Patterns Introduction	1.5		1.2
12	VOR and DME Intersection Holding	1.3		1.0
13	GPS Holding	1.3		1.0
14	Combined Holding Techniques (Review)	1.5		1.2
15	**Stage Two Check**	1.5		1.2
16	VOR Instrument Approach Procedures	1.3		1.0
17	Localizer Instrument Approach Procedures	1.3		1.0
18	ILS Instrument Approach Procedures	1.3		1.0
19	GPS Instrument Approach Procedures	1.3		1.0
20	PAR and ASR Instrument Approach Procedures	1.3		1.0
21	Departure Procedures (ODP, SIDs)	1.3		1.0
22	Arrival Procedures (STARs)	1.3		1.0
23	Comprehensive Approach Techniques (Review)	1.5		1.2
24	**Stage Three Check**	1.3		1.0
25	IFR Emergency Procedures	1.3		1.0
26	IFR Cross-Country Planning and Procedures	1.3		1.0
27	IFR Cross-Country Flight	2.8	2.8	2.5
28	Comprehensive Skills Review	1.5		1.2
29	**Stage Four Check**	1.8		1.5
30	**End-of-Course Test and Mock Checkride**	2.3		2.0
	Part 141 Total Time (hours)	**44.0**	**2.8**	**35.0**
	Part 61 Total Time* (hours)	**49.0**	**7.8**	**40.0**

******

Reach for Skies 55-60 hours

*Part 61 learners must accumulate an additional 5.0 hours of total instrument time to meet the required flight experience requirements. If necessary, Gold Seal recommends extending or repeating **lesson 27, IFR Cross-Country Flight**; however, this time may be added to any lesson(s) at the instructor's discretion as needed to build proficiency.

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Required Flight Training - Part 141 - Instrument Rating

List of the flight tasks required by 14 CFR 141 Appendix C and where each is located within this syllabus.

Section	Subject	Stage	Lesson(s)
4.(a).(1)	35 hours of instrument training if the course is for an initial instrument rating.	1-4	All Lessons
4.(c).(1)(i)-(iv)	Instrument training time from a certificated flight instructor with an instrument rating on the approved areas of operation in paragraph (d) of this section including at least one cross-country flight that is in the category and class of airplane that the course is approved for, and is performed under IFR; Is a distance of at least 250 nautical miles along airways or ATC-directed routing with one segment of the flight consisting of at least a straight-line distance of 100 nautical miles between airports; involves an instrument approach at each airport; and involves three different kinds of approaches with the use of navigation systems	4	27
4.(d)	Each course must include flight training on the areas of operation listed under this paragraph appropriate to the instrument aircraft category and class rating (if a class rating is appropriate) for which the course applies:		
4.(d).(1)	Preflight preparation	1-4	All Lessons
4.(d).(2)	Preflight procedures	1-4	All Lessons
4.(d).(3)	Air traffic control clearances and procedures	4	26, 27
4.(d).(4)	Flight by reference to instruments	1-4	All Lessons
4.(d).(5)	Navigation systems	2	7-9
4.(d).(6)	Instrument approach procedures	3	16-20
4.(d).(7)	Emergency operations	4	25
4.(d).(8)	Postflight procedures	1-4	All Lessons

Part 61 Training: Learners training under Part 61 should reference the specific aeronautical experience requirements listed in 14 CFR Part 61.65. This section outlines the necessary flight tasks and associated hours for obtaining the Instrument Rating.

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Stage 1 - Basic Instrument Skills

Objective: The objective of Stage 1 is to equip the learner with the fundamental instrument flying skills and procedural knowledge essential for safe and proficient IFR operations. Throughout this stage, learners will be introduced to core instrument flight maneuvers, partial-panel techniques, and critical aircraft control procedures. This foundational training ensures that each learner develops the confidence and competence necessary to operate an aircraft solely by reference to instruments, preparing them for the comprehensive Stage One Check.

Lesson	Title
1	Fundamentals of Instrument Flying
2	Partial-Panel Instrument Flying
3	Instrument Flight Patterns and Procedure Turns
4	Integrated Attitude Flying (Review)
5	Advanced Partial-Panel Flying
6	Stage One Check

Completion Standards: Stage 1 completion will be achieved when the learner has successfully passed the Stage One Check, demonstrating thorough proficiency in all required maneuvers and procedures. The learner must show the ability to conduct instrument flight operations safely, maintaining strict adherence to flight safety standards, operational procedures, and air traffic control requirements. The successful completion of this stage verifies that the learner is prepared for more advanced instrument flight training, having established a solid base of essential instrument flying skills.

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Lesson 1 - Fundamentals of Instrument Flying

Objective: To develop the learner's proficiency in maintaining and adjusting aircraft attitude solely by reference to instruments. This includes performing rate climbs, descents, and timed turns using instrument references. Learners will also practice instrument takeoff procedures and managing airspeed changes under instrument conditions.

Lesson Requirements **Study Resources:** GS: Sec 1 IFH: Ch 5, 7

Tasks	Description
☐ Preflight Preparation	Conduct preflight preparation including reviewing weather information such as METARs, TAFs, NOTAMs, and other pertinent weather data, flight planning, and obtaining necessary clearances. Ensure all pilot and aircraft certificates and documents are in order, review aircraft logbooks.
☐ Preflight Procedures	Perform preflight procedures and the preflight inspection using appropriate checklists, including inspecting and verifying the functionality of all aircraft systems required for IFR flight, checking the accuracy and operation of all flight instruments and navigation equipment, and conducting a comprehensive flight deck check to ensure all switches, controls, and indicators are set correctly and functioning as required.
☐ Use of Checklists	Proper use of pre-flight, in-flight, and post-flight checklists to ensure all procedures and safety measures are adhered to.
☐ Attitude Instrument Flying	Develop skills to maintain and adjust aircraft attitude solely by reference to instruments.
☐ Airplane Flight Instruments	Understand the function and interpretation of primary flight instruments (attitude indicator, altimeter, airspeed indicator, etc.).
☐ Instrument Takeoff	Appropriately cross-check instruments prior to the takeoff roll and on the runway and transitioning from a visual takeoff to flight solely by reference to instruments.
☐ Straight-and-Level Flight	Practice maintaining constant altitude and heading by reference to instruments.
☐ Change of Airspeed	Learn to make smooth and controlled changes in airspeed using instruments.
☐ Constant Airspeed Climbs and Descents	Practice climbs and descents at a constant airspeed by reference to instruments.
☐ Standard Rate Turns	Execute turns at a standard rate using the turn coordinator and other flight instruments.
☐ Timed Turns	Perform timed turns to specific headings to develop accuracy in turn execution.
☐ Managing Airspeed Changes	Learn to manage airspeed changes effectively during various phases of flight under instrument conditions.
☐ Rate Climbs and Descents	Conduct climbs and descents at specified rates by reference to instruments.
☐ Recovery from Unusual Flight Attitudes	Recognize and recovering from unusual attitudes using instrument references.
☐ Postflight Procedures	Conduct a postflight inspection and secure the aircraft.

Completion Standards: The learner must demonstrate proficiency in basic attitude instrument flying and associated maneuvers. The learner must maintain aircraft control at all times, adhering to the following tolerances: maintain altitude within ±200 feet, airspeed within ±15 knots (or +15/-0 knots as appropriate), heading within ±15 degrees, and bank angle within ±10 degrees. The learner should also demonstrate proper use of checklists, understand the function of primary flight instruments, and effectively manage airspeed changes during various phases of flight under instrument conditions.

_____ _____ _____

Completion Date **Flight Time** **Instructor Signature**

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Lesson 2 - Partial-Panel Instrument Flying

Objective: The objective of this lesson is to develop the learner's proficiency in flying the aircraft using a limited set of instruments to simulate instrument failures and abnormal system conditions. Learners will practice maintaining control during straight-and-level flight, airspeed changes, climbs, descents, and turns using partial-panel instruments. Additionally, learners will practice steep turns, slow flight, stalls, timed turns, and recovery from unusual flight attitudes using backup instruments.

Lesson Requirements **Study Resources:** IFH: Ch 7

Task	Description
☐ Review Previous Lesson	Review and reinforce tasks from prior lesson(s) to build proficiency.
☐ Preflight Preparation and Procedures	Review weather information, ensure all certificates and documents are in order, and review aircraft logbooks. Use appropriate checklists to complete the preflight inspection ensuring the functionality of all aircraft systems, flight instruments, and navigation equipment.
☐ Loss of Primary Flight Instrument Indicators	Simulate the loss of primary flight instruments and learning to rely on backup instruments to maintain control.
☐ Straight-and-Level Flight	Practice maintaining constant altitude and heading using a limited set of instruments.
☐ Change of Airspeed	Learn to make smooth and controlled changes in airspeed using backup instruments.
☐ Constant Airspeed Climbs and Descents	Practice climbs and descents at a constant airspeed using partial-panel instruments.
☐ Rate Climbs and Descents	Conduct climbs and descents at specified rates using backup instruments.
☐ Standard Rate Turns	Execute turns at a standard rate using the turn coordinator and magnetic compass.
☐ Magnetic Compass Turns	Perform turns using the magnetic compass as the primary reference.
☐ Steep Turns	Practice steep turns using partial-panel instruments to maintain control.
☐ Slow Flight	Maneuver the aircraft at slow speeds using a limited set of instruments.
☐ Power-On and Power-Off Stalls	Recognize and recovering from power-on and power-off stalls using backup instruments.
☐ Timed Turns to Headings	Perform timed turns to specific headings to develop accuracy using partial-panel instruments.
☐ Recovery from Unusual Flight Attitudes	Recognize and recovering from unusual attitudes using partial-panel instrument references.
☐ Postflight Procedures	Conduct a postflight inspection and secure the aircraft.

Completion Standards: The learner must demonstrate an understanding of the skills required to maintain aircraft control during partial-panel instrument flight, adhering to the following tolerances: maintain altitude within ±150 feet, airspeed within ±15 knots (or +15/-0 knots as appropriate), heading within ±15 degrees, and bank angle within ±10 degrees. The learner should demonstrate increased proficiency in constant rate climbs and descents, timed turns, and magnetic compass turns, with the ability to roll out on the desired heading within ±15 degrees. The learner should also effectively recognize and recover from unusual attitudes using partial-panel instrument references.

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Completion Date **Flight Time** **Instructor Signature**

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Lesson 3 - Instrument Flight Patterns and Procedure Turns

Objective: The objective of this lesson is to develop the learner's ability to precisely control the aircraft during attitude instrument flying by practicing standard instrument flight patterns. Learners will be introduced to and practice maneuvers that contribute to understanding procedure turns and course reversals, including standard procedure turns, the 80/260 procedure turn, and teardrop holding pattern entries.

Lesson Requirements **Study Resources:** GS: Sec 4, 5 IFH: Ch 1, 7 IPH: Ch 4

Task	Description
☐ Review Previous Lesson	Review and reinforce tasks from prior lesson(s) to build proficiency.
☐ Preflight Preparation and Procedures	Review weather information, ensure all certificates and documents are in order, and review aircraft logbooks. Use appropriate checklists to complete the preflight inspection ensuring the functionality of all aircraft systems, flight instruments, and navigation equipment.
☐ Standard Procedure Turn	Practice standard procedure turns to develop precision and consistency in executing course reversals.
☐ 80/260 Procedure Turn	Learn and execute the 80/260 procedure turn as a method for course reversal.
☐ Teardrop Holding Pattern Entry	Practice teardrop entries into holding patterns to develop accuracy and consistency.
☐ Holding Pattern Familiarization	Introduce basic concepts of holding patterns, including entry techniques and maintain a simple holding pattern to develop initial familiarity.
☐ Patterns Applicable to Circling Approaches	Practice flight patterns that are applicable to circling approaches to ensure proficiency in circling maneuvering.
☐ Postflight Procedures	Conduct a postflight inspection and secure the aircraft.

Completion Standards: The learner must demonstrate an understanding of various basic instrument flight patterns and their applications. The learner must maintain control at all times, adhering to the following tolerances: maintain altitude within ±150 feet, airspeed within ±15 knots (or +15/-0 knots as appropriate), heading within ±15 degrees, and bank angle within ±10 degrees, and maintain the desired rate of climb/descent within ±200 fpm. The learner should also demonstrate proficiency in executing procedure turns and holding patterns, maintaining the ability to roll out on the specified heading within ±15 degrees and perform circling approach patterns with precision.

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Completion Date **Flight Time** **Instructor Signature**

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Lesson 4 - Integrated Attitude Flying (Review)

Objective: The objective of this lesson is to reinforce and review integrated attitude instrument flying skills using full-panel instruments. Learners will practice various maneuvers including instrument takeoff, straight-and-level flight, constant airspeed climbs and descents, constant rate climbs and descents, standard rate turns, steep turns, changes of airspeed, maneuvering during slow flight, stalls, and recovery from unusual flight attitudes.

Lesson Requirements **Study Resources:** GS: Sec 1 IFH: Ch 6, 7

Task	Description
☐ Review Previous Lesson	Review and reinforce tasks from prior lesson(s) to build proficiency.
☐ Preflight Preparation and Procedures	Review weather information, ensure all certificates and documents are in order, and review aircraft logbooks. Use appropriate checklists to complete the preflight inspection ensuring the functionality of all aircraft systems, flight instruments, and navigation equipment.
☐ Instrument Takeoff	Review proper procedures for instrument takeoff, ensuring smooth transition from visual to instrument flight.
☐ Straight-and-Level Flight	Practice maintaining constant altitude and heading.
☐ Constant Airspeed Climbs and Descents	Review climbs and descents at a constant airspeed.
☐ Constant Rate Climbs and Descents	Conduct climbs and descents at specified rates.
☐ Standard Rate Turns	Execute standard rate turns to maintain accuracy.
☐ Steep Turns	Practice steep turns to enhance precision and control.
☐ Change of Airspeed	Review smooth and controlled changes in airspeed.
☐ Maneuvering During Slow Flight	Practice slow flight maneuvers to maintain control and precision at low speeds.
☐ Stalls (Power-On and Power-Off)	Review recognition and recovery from power-on and power-off stalls.
☐ Recovery from Unusual Flight Attitudes	Practice recovery techniques from unusual attitudes to ensure proper control and safety.
☐ Postflight Procedures	Conduct a postflight inspection and secure the aircraft.

Completion Standards: The learner must exhibit precise and coordinated control of the aircraft during full-panel attitude instrument flight. The learner must consistently maintain altitude within ±150 feet, airspeed within ±15 knots (or +15/-0 knots as appropriate), heading within ±15 degrees, bank angle within ±10 degrees, and rate of climb/descent within ±200 fpm. Additionally, the learner should demonstrate accurate recovery from stalls and unusual attitudes, ensuring control is maintained throughout the maneuvers.

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Completion Date **Flight Time** **Instructor Signature**

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Lesson 5 - Advanced Partial-Panel Flying

Objective: The objective of this lesson is to review and strengthen the learner's advanced partial-panel flying techniques. Learners will practice maintaining control and precision in various maneuvers using a limited set of instruments. This includes straight-and-level flight, constant airspeed climbs and descents, magnetic compass turns, timed turns to magnetic compass headings, maneuvering during slow flight, stalls, recovery from unusual flight attitudes, and procedure turns.

Lesson Requirements **Study Resources:** GS: Sec 4, 5 IFH: Ch 1, 7 IPH: Ch 4

Task	Description
☐ Review Previous Lesson	Review and reinforce tasks from prior lesson(s) to build proficiency.
☐ Preflight Preparation and Procedures	Review weather information, ensure all certificates and documents are in order, and review aircraft logbooks. Use appropriate checklists to complete the preflight inspection ensuring the functionality of all aircraft systems, flight instruments, and navigation equipment.
☐ Straight-and-Level Flight	Maintain constant altitude and heading using partial-panel instruments.
☐ Constant Airspeed Climbs and Descents	Perform climbs and descents at a constant airspeed with limited instruments.
☐ Magnetic Compass Turns	Execute turns using the magnetic compass as the primary reference.
☐ Timed Turns to Magnetic Compass Headings	Perform timed turns to specific magnetic compass headings.
☐ Maneuvering During Slow Flight	Maintain control and precision while maneuvering at slow speeds with limited instruments.
☐ Stalls (Power-On and Power-Off)	Recognize and recover from power-on and power-off stalls using partial-panel instruments.
☐ Recovery from Unusual Flight Attitudes	Practice recovery techniques from unusual attitudes using partial-panel references.
☐ Standard Procedure Turn	Execute standard procedure turns to develop precision and consistency in course reversals using limited instruments.
☐ 80/260 Procedure Turn	Perform the 80/260 procedure turn as a method for course reversal with partial-panel instruments.
☐ Teardrop Holding Pattern Entry	Practice teardrop entries into holding patterns to develop accuracy and consistency with limited instruments.
☐ Postflight Procedures	Conduct a postflight inspection and secure the aircraft.

Completion Standards: The learner must demonstrate a comprehensive understanding and proficiency in advanced partial-panel flying techniques. The learner must maintain control at all times, adhering to the following tolerances: maintain altitude within ±100 feet, airspeed within ±10 knots (or +10/-0 knots as appropriate), heading within ±10 degrees, bank angle within ±10 degrees, and rate of climb/descent within ±200 fpm. Additionally, the learner should exhibit correct recovery procedures from stalls and unusual attitudes without overcontrolling during partial-panel operations.

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Completion Date **Flight Time** **Instructor Signature**

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Lesson 6 - Stage One Check

Objective: The objective of this lesson is to evaluate the learner's proficiency in all instrument skills learned in Stage One. The learner will demonstrate their ability to perform all maneuvers and procedures effectively, ensuring they are prepared for more advanced training. This stage check focuses on confirming proficiency, readiness to progress, and adherence to performance standards and safety protocols.

Lesson Requirements

Task	Task
☐ Preflight Preparation and Procedures	☐ Constant Rate Climbs and Descents
☐ Attitude Instrument Flying	☐ Recovery from Unusual Flight Attitudes
☐ Airplane Flight Instruments	☐ Slow Flight
☐ Instrument Takeoff	☐ Power-On and Power-Off Stalls
☐ Straight-and-Level Flight	☐ Standard Procedure Turn
☐ Change of Airspeed	☐ 80/260 Procedure Turn
☐ Constant Airspeed Climbs and Descents	☐ Teardrop Holding Pattern Entry
☐ Standard Rate Turns	☐ Holding Pattern Familiarization
☐ Timed Turns	☐ Patterns Applicable to Circling Approaches
☐ Magnetic Compass Turns	☐ Postflight Procedures
☐ Managing Airspeed Changes	

Completion Standards: The lesson and Stage One are complete when the learner exhibits proficiency in attitude instrument flying (both full and partial panel). The learner must maintain control at all times, adhering to the following tolerances: maintain altitude within ±100 feet, airspeed within ±10 knots (or +10/-0 knots as appropriate), heading within ±10 degrees, and bank angle within ±10 degrees, and rate of climb/descent within ±200 fpm. Additionally, the learner must effectively perform all maneuvers without instructor assistance, demonstrating readiness for more advanced training.

Completion Date **Flight Time** **Instructor Signature**

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Stage 2 - Navigation and Holding Procedures

Objective: The objective of Stage 2 is to develop the learner's proficiency in advanced navigation and holding procedures using a variety of navigation systems. Throughout this stage, learners will enhance their skills in VOR and GPS navigation, including advanced GPS techniques and DME arcs. Additionally, learners will master the fundamentals and complexities of holding patterns using different navigation aids. This stage aims to ensure that learners can confidently execute precise navigation and holding procedures, preparing them for the comprehensive Stage Two Check.

Lesson	Title
7	VOR Navigation Techniques
8	GPS Navigation Techniques
9	Advanced GPS Navigation
10	DME Arcs
11	Holding Patterns Introduction
12	VOR and DME Intersection Holding
13	GPS Holding
14	Combined Holding Techniques (Review)
15	Stage Two Check

Completion Standards: Stage 2 completion will be achieved when the learner has successfully passed the Stage Two Check, demonstrating thorough proficiency in all required navigation and holding maneuvers. The learner must show the ability to navigate and hold accurately using VOR, GPS, and DME systems, maintaining strict adherence to flight safety standards, operational procedures, and air traffic control requirements. The successful completion of this stage verifies that the learner is prepared for more advanced instrument flight training, having established a solid foundation in navigation and holding procedures.

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Lesson 7 - VOR Navigation Techniques

Objective: The objective of this lesson is to develop the learner's ability to navigate using VOR (Very high frequency Omnidirectional Range) systems. This includes performing VOR and VOT (VOR Test station) accuracy checks, understanding VOR orientation, intercepting and tracking VOR radials both inbound and outbound, compensating for wind effects, determining station passage, and performing VOR time and distance calculations.

Lesson Requirements

Study Resources: GS: Sec 2 IFH: Ch 9

Task	Description
☐ Review Previous Lesson	Review and reinforce tasks from prior lesson(s) to build proficiency.
☐ Preflight Preparation and Procedures	Review weather information, ensure all certificates and documents are in order, and review aircraft logbooks. Use appropriate checklists to complete the preflight inspection ensuring the functionality of all aircraft systems, flight instruments, and navigation equipment.
☐ VOR and VOT Accuracy Checks	Perform accuracy checks on VOR equipment to ensure proper functionality and reliability.
☐ VOR Orientation (TO-FROM and CDI)	Understand VOR orientation including TO-FROM indications and Course Deviation Indicator (CDI) interpretation.
☐ Intercepting a VOR Radial	Learn techniques for intercepting a specified VOR radial.
☐ Tracking a VOR Radial Inbound	Practice tracking a VOR radial inbound to the station, maintaining course accuracy.
☐ Tracking a VOR Radial Outbound	Practice tracking a VOR radial outbound from the station, maintaining course accuracy.
☐ Reverse Sensing	Understand and identify reverse sensing when tracking a VOR radial, both inbound and outbound, and learn to correct for it.
☐ VOR Time and Distance Calculations	Calculate time and distance to or from a VOR station based on aircraft speed and radial information.
☐ Effects of Wind on VOR Navigation	Learn to compensate for wind effects while navigating using VOR.
☐ Determining Station Passage	Identify and confirm station passage using VOR indications.
☐ Postflight Procedures	Conduct a postflight inspection and secure the aircraft.

Completion Standards: The learner demonstrates proficiency in navigating using VOR systems, maintaining precise control throughout. The learner must adhere to the following tolerances: maintaining altitude within ±150 feet, airspeed within ±10 knots (or +10/-0 knots as appropriate), heading within ±10 degrees, and bank angle within ±10 degrees. The learner should accurately perform VOR orientation, successfully intercept and track specified radials, account for wind effects, positively identify station passage, and perform VOR time and distance calculations accurately.

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Completion Date **Flight Time** **Instructor Signature**

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Lesson 8 - GPS Navigation Techniques

Objective: The objective of this lesson is to introduce the learner to the basics of GPS (Global Positioning System) navigation. This includes understanding and practicing GPS system features, ensuring database currency, programming the GPS for navigation, managing automation, determining RAIM predictability, orienting using GPS displays, and finding nearest airports, navaids, and waypoints.

Lesson Requirements **Study Resources:** GS: Sec 2 IFH: Ch 9 IPH: Ch 6

Task	Description
☐ Review Previous Lesson	Review and reinforce tasks from prior lesson(s) to build proficiency.
☐ Preflight Preparation and Procedures	Review weather information, ensure all certificates and documents are in order, and review aircraft logbooks. Use appropriate checklists to complete the preflight inspection ensuring the functionality of all aircraft systems, flight instruments, and navigation equipment.
☐ GPS System Features	Understand the various features and functions of the GPS system used in the aircraft.
☐ Determining GPS Database Currency	Check and confirm the currency of the GPS database to ensure accurate and up-to-date navigation information.
☐ GPS Programming	Learn to program the GPS system for various types of navigation, including direct-to, flight plans, and waypoints.
☐ Automation Management	Manage the automation features of the GPS system, including autopilot integration (if equipped) and flight management.
☐ Determining RAIM Predictability	Understand and determine Receiver Autonomous Integrity Monitoring (RAIM) predictability to ensure GPS reliability.
☐ GPS Orientation	Familiarize with the orientation features of the GPS, including map displays and situational awareness tools.
☐ Finding Nearest Airports, Navaids, and Waypoints Using GPS	Learn to use the GPS system to quickly locate the nearest airports, navaids, and waypoints for navigation and emergency planning.
☐ Postflight Procedures	Conduct a postflight inspection and secure the aircraft.

Completion Standards: The Learner must demonstrate a basic understanding and proficiency in operating the GPS system for navigation. The learner must maintain control throughout the lesson, adhering to the following tolerances: maintaining altitude within ±150 feet, airspeed within ±10 knots (or +10/-0 knots as appropriate), heading within ±10 degrees, and bank angle within ±10 degrees. The learner should effectively perform basic GPS operations including identifying system features, RAIM predictability, automation management, programming, orientation, and finding nearest airports, navaids, and waypoints.

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Completion Date **Flight Time** **Instructor Signature**

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Lesson 9 - Advanced GPS Navigation

Objective: The objective of this lesson is to enhance the learner's proficiency in advanced GPS navigation techniques. Learners will deepen their understanding and practice of advanced GPS system features, ensuring database currency, advanced GPS programming, complex automation management, determining RAIM predictability, GPS orientation, intercepting and tracking precise GPS courses, and mastering overall GPS navigation for complex flight operations.

Lesson Requirements **Study Resources:** GS: Sec 2 IFH: Ch 9 IPH: Ch 6

Task	Description
☐ Review Previous Lesson	Review and reinforce tasks from prior lesson(s) to build proficiency.
☐ Preflight Preparation and Procedures	Review weather information, ensure all certificates and documents are in order, and review aircraft logbooks. Use appropriate checklists to complete the preflight inspection ensuring the functionality of all aircraft systems, flight instruments, and navigation equipment.
☐ Advanced GPS System Features	Explore and utilize advanced features and functions of the GPS system, including advanced navigation aids and performance monitoring tools.
☐ Updating the GPS Database	Learn the process of updating the GPS database to ensure all navigation information is current and accurate for safe and reliable flight operations.
☐ Advanced GPS Programming	Learn and apply advanced programming techniques for the GPS system, including complex flight plans, multiple waypoints, and advanced route management.
☐ Automation Management	Manage the automation features of the GPS system, including autopilot integration and flight management.
☐ Determining RAIM Predictability	Understand and determine Receiver Autonomous Integrity Monitoring (RAIM) predictability to ensure GPS reliability.
☐ GPS Orientation	Familiarize with the orientation features of the GPS, including map displays and situational awareness tools.
☐ Intercepting a Course Using GPS	Practice intercepting a specified course using GPS navigation.
☐ Tracking a GPS Course	Track a GPS-defined course accurately, maintaining course centerline.
☐ GPS Navigation	Perform navigation tasks using the GPS system, including route management and deviation correction.
☐ Postflight Procedures	Conduct a postflight inspection and secure the aircraft.

Completion Standards: The learner must demonstrate advanced proficiency in GPS navigation, maintaining precise control throughout complex maneuvers. The learner must adhere to the following tolerances: maintaining altitude within ±150 feet, airspeed within ±10 knots (or +10/-0 knots as appropriate), heading within ±10 degrees, and bank angle within ±10 degrees. Additionally, the learner should be able to intercept and track a GPS course with no more than a 3/4-scale deflection of the CDI, maintain lateral course within ±2 NM, determine RAIM predictability accurately, and effectively manage advanced GPS programming and automation for comprehensive flight navigation.

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Completion Date **Flight Time** **Instructor Signature**

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Lesson 10 - DME Arcs

Objective: The objective of this lesson is to develop the learner's proficiency in flying DME arcs using both VOR and GPS navigation techniques. Learners will practice calculating VOR time and distance to the station, intercepting and tracking DME arcs using VOR, substituting GPS for VOR/DME, intercepting and tracking DME arcs using GPS, and compensating for wind effects while tracking a DME arc.

Lesson Requirements **Study Resources:** IFH: Ch 9 IPH: Ch 4

Task	Description
☐ Review Previous Lesson	Review and reinforce tasks from prior lesson(s) to build proficiency.
☐ Preflight Preparation and Procedures	Review weather information, ensure all certificates and documents are in order, and review aircraft logbooks. Use appropriate checklists to complete the preflight inspection ensuring the functionality of all aircraft systems, flight instruments, and navigation equipment.
☐ Calculating VOR Time and Distance to Station	Practice calculating time and distance to a VOR station based on groundspeed, time, and radials crossed.
☐ Intercepting DME Arcs - VOR	Learn techniques for intercepting DME arcs using VOR navigation.
☐ Tracking DME Arcs - VOR	Develop skills for accurately tracking DME arcs using VOR.
☐ DME Substitutions - GPS in Lieu of VOR/DME	Understand and apply GPS as a substitute for traditional VOR/DME navigation.
☐ Intercepting DME Arcs - GPS	Learn techniques for intercepting DME arcs using GPS navigation.
☐ Tracking DME Arcs - GPS	Develop skills for accurately tracking DME arcs using GPS.
☐ Effects of Wind on Tracking a DME Arc	Practice compensating for wind effects while tracking a DME arc.
☐ Postflight Procedures	Conduct a postflight inspection and secure the aircraft.

Completion Standards: The learner must demonstrate a thorough understanding and proficient execution of flying DME arcs using both VOR and GPS navigation techniques. Throughout the lesson, the learner must consistently maintain altitude within ±100 feet, airspeed within ±10 knots (or +10/-0 knots as appropriate), heading within ±10 degrees, and bank angle within ±10 degrees. The learner should be capable of accurately calculating VOR time and distance, intercepting and tracking DME arcs using both VOR and GPS systems, and effectively compensating for wind effects. The learner must keep the course deviation indicator (CDI) deflection within 3/4 scale or maintain the course within 10 degrees when using an RMI (Remote Magnetic Indicator).

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Completion Date **Flight Time** **Instructor**

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Lesson 11 - Holding Patterns Introduction

Objective: The objective of this lesson is to introduce the learner to holding procedures, including holding instructions, holding pattern entry procedures, and the use of automation systems during holding. Learners will practice various entry methods, standard and nonstandard holding patterns, and holding based on both time and distance.

Lesson Requirements **Study Resources:** GS: Sec 4 IFH: Ch 1, 10 IPH: Ch 3

Task	Description
☐ Review Previous Lesson	Review and reinforce tasks from prior lesson(s) to build proficiency.
☐ Preflight Preparation and Procedures	Review weather information, ensure all certificates and documents are in order, and review aircraft logbooks. Use appropriate checklists to complete the preflight inspection ensuring the functionality of all aircraft systems, flight instruments, and navigation equipment.
☐ Review Procedure Turns	Review procedure turns to understand their purpose and execution.
☐ Review Course Reversals	Review course reversals to understand their role in instrument flight procedures.
☐ ATC Holding Clearances	Learn to interpret and execute ATC holding clearances.
☐ Holding Pattern Entry	Understand the basics of holding pattern entries, including determining entry methods.
☐ Parallel Entry	Practice parallel entry into a holding pattern.
☐ Teardrop Entry	Practice teardrop entry into a holding pattern.
☐ Direct Entry	Practice direct entry into a holding pattern.
☐ Standard Holding Pattern	Learn to fly a standard holding pattern, including timing and corrections.
☐ Nonstandard Holding Pattern	Learn to fly a nonstandard holding pattern, understanding the differences and necessary adjustments.
☐ Timed Holding Patterns	Practice timed holding patterns to maintain position within the hold.
☐ Distance Holding Patterns	Practice holding patterns based on distance rather than time.
☐ Using Automation During Holding	Learn to use autopilot and other automation systems to assist in holding pattern operations.
☐ Postflight Procedures	Conduct a postflight inspection and secure the aircraft.

Completion Standards: The learner must demonstrate an understanding of ATC holding instructions, holding pattern entry procedures, and the ability to maintain position within a holding pattern. The learner must maintain control at all times, adhering to the following tolerances: maintaining altitude within ±100 feet, airspeed within ±10 knots (or +10/-0 knots as appropriate), heading within ±10 degrees, and bank angle within ±10 degrees. Additionally, the learner should effectively use automation systems related to IFR operations and holding patterns.

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Completion Date **Flight Time** **Instructor**

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Lesson 12 - VOR and DME Intersection Holdings

Objective: The objective of this lesson is to develop the learner's skills in executing holding patterns using VORs, DME intersections, and localizers. This includes understanding ATC clearances and holding instructions, practicing holding pattern entries (parallel, teardrop, and direct), and using automation systems during holding. Learners will practice both standard and nonstandard holding patterns, timed holds, distance holds, VOR holding, localizer holding, and DME holding.

Lesson Requirements **Study Resources:** GS: Sec 4 IFH: Ch 1, 10 IPH: Ch 3

Task	Description
☐ Review Previous Lesson	Review and reinforce tasks from prior lesson(s) to build proficiency.
☐ Preflight Preparation and Procedures	Review weather information, ensure all certificates and documents are in order, and review aircraft logbooks. Use appropriate checklists to complete the preflight inspection ensuring the functionality of all aircraft systems, flight instruments, and navigation equipment.
☐ ATC Holding Clearances	Learn to interpret and execute ATC holding clearances specific to VORs and DME intersections.
☐ VOR Holding	Practice holding patterns at a VOR station, including entry, maintaining, and exiting the hold.
☐ Localizer Holding	Practice holding patterns using a localizer, including entry, maintaining, and exiting the hold.
☐ DME Holding	Practice holding patterns using DME, including holding at a fix with courses away from and toward a VORTAC or VOR/DME.
☐ Holding Pattern Entry	Understand and execute holding pattern entry techniques, including parallel, teardrop, and direct entries.
☐ Standard and Nonstandard Holding Patterns	Learn to fly both standard and nonstandard holding patterns, understanding the differences and necessary adjustments.
☐ Timed Holding Patterns	Practice maintaining position within a holding pattern based on time intervals.
☐ Distance Holding Patterns	Practice holding patterns based on DME distance measurements.
☐ Using Automation During Holding	Utilize autopilot and other automation systems to assist in maintaining holding patterns.
☐ Postflight Procedures	Conduct a postflight inspection and secure the aircraft.

Completion Standards: The learner must demonstrate an understanding of ATC holding instructions and proficiently execute holding pattern entries and maintaining position within VOR, localizer, and DME intersection holding patterns. The learner must maintain control at all times, adhering to the following tolerances: maintaining altitude within ±100 feet, airspeed within ±10 knots (or +10/-0 knots as appropriate), heading within ±10 degrees, and bank angle within ±10 degrees. Additionally, the learner should effectively use automation systems related to IFR operations and holding patterns.

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Completion Date **Flight Time** **Instructor Signature**

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Lesson 13 - GPS Holding

Objective: The objective of this lesson is to develop the learner's skills in executing holding patterns using GPS-defined waypoints. This includes understanding ATC clearances and holding instructions, practicing holding pattern entries (parallel, teardrop, and direct), and using automation systems during holding. Learners will practice both standard and nonstandard holding patterns, timed holds, distance holds, and ensure GPS database currency and RAIM predictability.

Lesson Requirements **Study Resources:** GS: Sec 4 IFH: Ch 1, 10 IPH: Ch 3

Task	Description
☐ Review Previous Lesson	Review and reinforce tasks from prior lesson(s) to build proficiency.
☐ Preflight Preparation and Procedures	Review weather information, ensure all certificates and documents are in order, and review aircraft logbooks. Use appropriate checklists to complete the preflight inspection ensuring the functionality of all aircraft systems, flight instruments, and navigation equipment.
☐ GPS Database Management	Ensure GPS database is current.
☐ RAIM Prediction and Monitoring	Check Receiver Autonomous Integrity Monitoring (RAIM) to ensure GPS accuracy and reliability during holding patterns.
☐ ATC Holding Clearances	Learn to interpret and execute ATC holding clearances specific to GPS-defined holding patterns.
☐ GPS Holding	Practice holding patterns using GPS waypoints, including entry, maintaining, and exiting the hold.
☐ Holding Pattern Entry	Understand and execute holding pattern entry techniques, including parallel, teardrop, and direct entries using GPS.
☐ Standard and Nonstandard Holding Patterns	Learn to fly both standard and nonstandard holding patterns using GPS, understanding the differences and necessary adjustments.
☐ Timed Holding Patterns	Practice maintaining position within a holding pattern based on time intervals using GPS.
☐ Distance Holding Patterns	Practice holding patterns based on GPS distance measurements.
☐ Using Automation During Holding	Utilize autopilot and other automation systems to assist in maintaining holding patterns defined by GPS waypoints.
☐ Postflight Procedures	Conduct a postflight inspection and secure the aircraft.

Completion Standards: The learner must demonstrate an understanding of ATC holding instructions and proficiently execute holding pattern entries and maintaining position within GPS-defined holding patterns. The learner must maintain control at all times, adhering to the following tolerances: maintaining altitude within ±100 feet, airspeed within ±10 knots (or +10/-0 knots as appropriate), heading within ±10 degrees, and bank angle within ±10 degrees. Additionally, the learner should effectively use automation systems related to IFR operations and holding patterns, ensure GPS database currency, and monitor RAIM predictability.

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Completion Date **Flight Time** **Instructor Signature**

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Lesson 14 - Combined Holding Techniques (Review)

Objective: The objective of this lesson is to review and refine all holding techniques learned, including those using VOR, VOR/DME, localizer, and GPS navigation systems. Learners will consolidate their skills in interpreting ATC clearances, executing various holding pattern entries, and using automation systems. By the end of the lesson, learners will be able to proficiently manage and execute standard and nonstandard holding patterns, timed holds, and distance holds across all navigation systems.

Lesson Requirements **Study Resources:** GS: Sec 4 IFH: Ch 1, 10 IPH: Ch 3

Task	Description
☐ Review Previous Lesson	Review and reinforce tasks from prior lesson(s) to build proficiency.
☐ Preflight Preparation and Procedures	Review weather information, ensure all certificates and documents are in order, and review aircraft logbooks. Use appropriate checklists to complete the preflight inspection ensuring the functionality of all aircraft systems, flight instruments, and navigation equipment.
☐ Review ATC Holding Clearances	Improve proficiency in interpreting and executing ATC holding clearances for various navigation systems.
☐ VOR Holding	Enhance skills in holding patterns at a VOR station, including entry, maintaining, and exiting the hold.
☐ Localizer Holding	Improve techniques for holding patterns using a localizer, including entry, maintaining, and exiting the hold.
☐ DME Holding	Develop proficiency in holding patterns using DME, including holding courses away from and toward a VORTAC or VOR/DME.
☐ GPS Holding	Refine techniques for holding patterns using GPS waypoints, including entry, maintaining, and exiting the hold.
☐ Holding Pattern Entry	Master holding pattern entry techniques, including parallel, teardrop, and direct entries for all navigation systems.
☐ Standard and Nonstandard Holding Patterns	Execute both standard and nonstandard holding patterns using VOR, localizer, DME, and GPS.
☐ Timed Holding Patterns	Perform holding patterns based on time intervals using various navigation systems.
☐ Distance Holding Patterns	Conduct holding patterns based on distance measurements using VOR/DME and GPS.
☐ Using Automation During Holding	Utilize autopilot and other automation systems to assist in maintaining holding patterns defined by VOR, localizer, DME, and GPS waypoints.
☐ Postflight Procedures	Conduct a postflight inspection and secure the aircraft.

Completion Standards: The learner must demonstrate proficiency in executing and maintaining holding patterns using VOR, VOR/DME, localizer, and GPS navigation systems. The learner must maintain control at all times, adhering to the following tolerances: maintaining altitude within ±100 feet, airspeed within ±10 knots (or +10/-0 knots as appropriate), heading within ±10 degrees, and bank angle within ±10 degrees. Additionally, the learner should effectively use automation systems related to IFR operations and holding patterns, and accurately perform entries and holds for all reviewed navigation systems.

Completion Date **Flight Time** **Instructor Signature**

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Lesson 15 - Stage Two Check

Objective: The objective of this lesson is to evaluate the learner's proficiency in all instrument skills learned in Stage Two. This stage check assesses the learner's ability to perform specific tasks from each lesson in Stage Two, ensuring they are prepared for more advanced training. The focus is on confirming proficiency, readiness to progress, and adherence to performance standards and safety protocols.

Lesson Requirements

Task	Task
☐ Preflight Preparation and Procedures	☐ ATC Holding Clearances
☐ VOR Accuracy Checks	☐ Holding Pattern Entry (Parallel, Teardrop, Direct)
☐ Intercepting and Tracking VOR Radials	☐ Standard and Nonstandard Holding Patterns
☐ Calculating VOR Time and Distance to Station	☐ Timed Holding Patterns
☐ GPS Database Currency and Updates	☐ Distance Holding Patterns
☐ GPS Programming	☐ VOR Holding
☐ Determining RAIM Predictability	☐ Localizer Holding
☐ GPS Orientation	☐ DME Holding
☐ Intercepting a Course Using GPS	☐ GPS Holding
☐ Tracking a GPS Course	☐ Automation Management
☐ GPS Navigation	☐ Postflight Procedures
☐ DME Arcs	

Completion Standards: The lesson and Stage Two are complete when the learner exhibits proficiency in all required tasks instrument navigation and holding skills covered in Stage Two. The learner must maintain control of the aircraft at all times, adhering to the following tolerances: maintaining altitude within ±100 feet, airspeed within ±10 knots (or +10/-0 knots as appropriate), heading within ±10 degrees, and bank angle within ±10 degrees. Additionally, the learner should perform all maneuvers without instructor assistance, demonstrating competence in managing all aspects of flight operations, including effective communication and emergency management, and readiness for more advanced training.

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Completion Date **Flight Time** **Instructor Signature**

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Stage 3 - Instrument Procedures

Objective: The objective of Stage 3 is to equip the learner with the necessary skills and knowledge to perform a wide range of instrument approach, arrival, and departure procedures. Throughout this stage, learners will be introduced to and practice various instrument approaches, including VOR, localizer, ILS, GPS, PAR, and ASR procedures. Additionally, learners will master departure procedures (ODP, SIDs) and arrival procedures (STARs). This stage aims to ensure that learners can execute these procedures with precision and confidence, preparing them for the comprehensive Stage Three Check.

Lesson	Title
16	VOR Instrument Approach Procedures
17	Localizer Instrument Approach Procedures
18	ILS Instrument Approach Procedures
19	GPS Instrument Approach Procedures
20	PAR and ASR Instrument Approach Procedures
21	Departure Procedures (ODP, SIDs)
22	Arrival Procedures (STARs)
23	Comprehensive Approach Techniques (Review)
24	Stage Three Check

Completion Standards: Stage 3 completion will be achieved when the learner has successfully passed the Stage Three Check, demonstrating thorough proficiency in all required instrument approach and departure procedures. The learner must show the ability to perform precise and safe instrument approaches and departures, adhering to flight safety standards, operational procedures, and air traffic control requirements. The successful completion of this stage verifies that the learner is prepared for the final stage of instrument flight training, having established a solid proficiency in various instrument procedures.

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Lesson 16 - VOR Instrument Approach Procedures

Objective: The objective of this lesson is to develop the learner's proficiency in conducting VOR instrument approach procedures. This includes understanding and interpreting approach procedure charts, complying with ATC approach clearances, and executing various segments of the approach, including procedure turns, DME arcs, missed approaches, and circling approaches. Learners will also practice handling inoperative navigation and visual aids and use radar vectoring during approaches.

Lesson Requirements **Study Resources:** GS: Sec 5 IFH: Ch 1, 9, 10 IPH: Ch 3, 4

Task	Description
☐ Review Previous Lesson	Review and reinforce tasks from prior lesson(s) to build proficiency.
☐ Preflight Preparation and Procedures	Review weather information, ensure all certificates and documents are in order, and review aircraft logbooks. Use appropriate checklists to complete the preflight inspection ensuring the functionality of all aircraft systems, flight instruments, and navigation equipment.
☐ Instrument Approach Segments	Understand the different segments of an instrument approach: initial, intermediate, final, and missed approach.
☐ Approach Procedure Charts	Learn to read and interpret VOR approach procedure charts.
☐ Airplane Approach Categories	Identify the appropriate approach category for the aircraft and understand the associated minimums.
☐ Procedure Turns	Practice procedure turns as required by the approach procedure.
☐ DME Arc	Execute DME arcs as part of the approach procedure.
☐ Approach Preparation	Prepare for the approach by gathering and verifying all necessary information and staying ahead of the aircraft.
☐ ATC Approach Clearances	Understand and comply with ATC approach clearances specific to VOR approaches.
☐ Flying the Approach	Conduct the approach, following all published procedures and instructions.
☐ Radar Vectoring	Respond to and follow radar vectoring instructions from ATC during the approach.
☐ Inoperative Navigation Equipment	Handle situations involving inoperative navigation equipment or navaids.
☐ Inoperative Visual Aids	Manage approaches when visual aids associated with the landing environment are inoperative.
☐ VOR, VOR/DME, VORTAC Instrument Approach Procedures	Conduct approaches using VOR, VOR/DME, and VORTAC navigation aids.
☐ Instrument Approach Timing	Properly time the approach from the final approach fix to the missed approach point when flying at the correct speed.
☐ Missed Approach	Execute missed approach procedures as published, including correctly identifying the missed approach point and transitioning to the missed approach segment.
☐ Circling Approach	Perform a circling approach as required.
☐ Landing from an Instrument Approach	Complete the landing from an instrument approach, ensuring a safe transition from instrument to visual references.
☐ Postflight Procedures	Conduct a postflight inspection and secure the aircraft.

Completion Standards: The learner must demonstrate proficiency in using approach charts, adhere to ATC approach clearances, and accurately perform approach and missed approach procedures. The learner must maintain precise control throughout the approach, ensuring the following tolerances: altitude within ±100 feet, airspeed within ±10 knots (or +10/-0 knots as appropriate), heading within ±10 degrees, and CDI deflection not exceeding 3/4-scale or within 10 degrees for RMI. Additionally, the learner should demonstrate proper holding pattern entries, accurate timing or leg lengths, and effectively handle situations involving inoperative navigation equipment or visual aids during the approach.

Completion Date **Flight Time** **Instructor Signature**

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Lesson 17 - Localizer Instrument Approach Procedures

Objective: The objective of this lesson is to develop the learner's proficiency in performing localizer-based instrument approaches. This includes understanding and interpreting approach procedure charts, complying with ATC approach clearances, and executing various segments of the approach, including procedure turns, DME arcs, missed approaches, and circling approaches. Learners will also practice handling inoperative navigation equipment, using radar vectoring during approaches, and conducting thorough approach briefings.

Lesson Requirements **Study Resources:** GS: Sec 5 IFH: Ch 1, 9, 10 IPH: Ch 4

Task	Description
☐ Review Previous Lesson	Review and reinforce tasks from prior lesson(s) to build proficiency.
☐ Preflight Preparation and Procedures	Review weather information, ensure all certificates and documents are in order, and review aircraft logbooks. Use appropriate checklists to complete the preflight inspection ensuring the functionality of all aircraft systems, flight instruments, and navigation equipment.
☐ Procedure Turns	Practice procedure turns as required by the approach procedure.
☐ DME Arc	Execute DME arcs as part of the approach procedure.
☐ Approach Briefing	Conduct a thorough approach briefing to ensure understanding and readiness.
☐ ATC Approach Clearances	Understand and comply with ATC approach clearances specific to localizer approaches.
☐ Radar Vectoring	Respond to and follow radar vectoring instructions from ATC during the approach.
☐ Inoperative Navigation Equipment	Handle situations involving inoperative navigation equipment or navaids.
☐ Localizer Instrument Approach Procedures	Perform approaches using the localizer, maintaining accuracy throughout the approach.
☐ Missed Approach	Execute missed approach procedures as published, including correctly identifying the missed approach point and transitioning to the missed approach segment.
☐ Circling Approach	Perform a circling approach as required.
☐ Landing from an Instrument Approach	Complete the landing from an instrument approach, ensuring a safe transition from instrument to visual references.
☐ Postflight Procedures	Conduct a postflight inspection and secure the aircraft.

Completion Standards: The learner must demonstrate proficiency in using approach charts, adhere to ATC approach clearances, and accurately perform approach and missed approach procedures for localizer approaches. The learner must maintain precise control throughout the approach, ensuring the following tolerances: altitude within ±100 feet, airspeed within ±10 knots (or +10/-0 knots as appropriate), heading within ±10 degrees, and CDI deflection not exceeding 3/4-scale or within 10 degrees for RMI. Additionally, the learner should demonstrate proper holding pattern entries, accurate timing from the final approach fix to the missed approach point, and effectively manage any inoperative equipment scenarios during the approach.

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Completion Date **Flight Time** **Instructor Signature**

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Lesson 18 - ILS Instrument Approach Procedures

Objective: The objective of this lesson is to develop the learner's proficiency in performing ILS (Instrument Landing System) instrument approaches. This includes understanding and interpreting approach procedure charts, complying with ATC approach clearances, and executing various segments of the approach, including procedure turns, DME arcs, missed approaches, and circling approaches. Learners will also practice handling inoperative navigation equipment, using radar vectoring during approaches, and conducting thorough approach briefings.

Lesson Requirements **Study Resources:** GS: Sec 5 IFH: Ch 1, 9, 10 IPH: Ch 4

Task	Description
☐ Review Previous Lesson	Review and reinforce tasks from prior lesson(s) to build proficiency.
☐ Preflight Preparation and Procedures	Review weather information, ensure all certificates and documents are in order, and review aircraft logbooks. Use appropriate checklists to complete the preflight inspection ensuring the functionality of all aircraft systems, flight instruments, and navigation equipment.
☐ Procedure Turns	Practice procedure turns as required by the approach procedure.
☐ DME Arc	Execute DME arcs as part of the approach procedure.
☐ Approach Briefing	Conduct a thorough approach briefing to ensure understanding and readiness.
☐ ATC Approach Clearances	Understand and comply with ATC approach clearances specific to ILS approaches.
☐ Radar Vectoring	Respond to and follow radar vectoring instructions from ATC during the approach.
☐ Inoperative Navigation Equipment	Handle situations involving inoperative navigation equipment or navaids.
☐ ILS Instrument Approach Procedures	Perform approaches using the full ILS system, maintaining accuracy throughout the approach.
☐ Missed Approach	Execute missed approach procedures as published, including correctly identifying the missed approach point and transitioning to the missed approach segment.
☐ Automation Management	Utilize the autopilot to manage the aircraft throughout all segments of the ILS approach. Adhere to any limitations of the automation system, and be prepared to manually override if necessary.
☐ Circling Approach	Perform a circling approach as required.
☐ Landing from an Instrument Approach	Complete the landing from an instrument approach, ensuring a safe transition from instrument to visual references.
☐ Postflight Procedures	Conduct a postflight inspection and secure the aircraft.

Completion Standards: The learner must demonstrate proficiency in using approach charts, adhere to ATC approach clearances, and accurately perform approach and missed approach procedures for ILS approaches. The learner must maintain precise control throughout the approach, ensuring the following tolerances: altitude within ±100 feet, airspeed within ±10 knots (or +10/-0 knots as appropriate), heading within ±10 degrees, and CDI deflection not exceeding 3/4-scale or within 10 degrees for RMI. Additionally, the learner should demonstrate proper holding pattern entries, accurate timing from the final approach fix to the missed approach point, and effectively manage any inoperative equipment scenarios during the approach.

Completion Date **Flight Time** **Instructor Signature**

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Lesson 19 - GPS Instrument Approach Procedures

Objective: The objective of this lesson is to develop the learner's proficiency in performing GPS instrument approaches. This includes understanding and interpreting approach procedure charts, complying with ATC approach clearances, and executing various segments of the approach, including procedure turns, missed approaches, and circling approaches. Learners will also practice handling inoperative navigation equipment, using radar vectoring during approaches, conducting thorough approach briefings, and using the autopilot during GPS approaches.

Lesson Requirements **Study Resources:** GS: Sec 5 IFH: Ch 1, 9, 10 IPH: Ch 3, 4

Task	Description
☐ Review Previous Lesson	Review and reinforce tasks from prior lesson(s) to build proficiency.
☐ Preflight Preparation and Procedures	Review weather information, ensure all certificates and documents are in order, and review aircraft logbooks. Use appropriate checklists to complete the preflight inspection ensuring the functionality of all aircraft systems, flight instruments, and navigation equipment.
☐ Procedure Turns	Practice procedure turns as required by the approach procedure.
☐ RAIM Predictability	Ensure RAIM predictability for the GPS approach to verify the reliability and accuracy of GPS signals before and during the approach.
☐ Approach Briefing	Conduct a thorough approach briefing to ensure understanding and readiness.
☐ ATC Approach Clearances	Understand and comply with ATC approach clearances specific to GPS approaches.
☐ Radar Vectoring	Respond to and follow radar vectoring instructions from ATC during the approach.
☐ Inoperative Navigation Equipment	Handle situations involving inoperative navigation equipment or GPS anomalies.
☐ GPS Instrument Approach Procedures	Perform LNAV, LNAV/VNAV, and LPV approaches (as equipped) using GPS, maintaining accuracy throughout all segments of the approach.
☐ Vertical Navigation (VNAV) Management	Manage vertical navigation during GPS approaches, especially for approaches with vertical guidance (LPV and LNAV/VNAV).
☐ Missed Approach	Execute missed approach procedures as published, including correctly identifying the missed approach point and transitioning to the missed approach segment.
☐ Circling Approach	Perform a circling approach as required.
☐ Using Autopilot for GPS Approaches	Utilize the autopilot to manage the aircraft throughout all segments of the GPS approach, including descent, alignment, and maintaining the glide path, adhering to any limitations of the automation system.
☐ Landing from an Instrument Approach	Complete the landing from an instrument approach, ensuring a safe transition from instrument to visual references.
☐ Automation Management	Utilize the autopilot to manage the aircraft throughout all segments of the GPS approach, including descent, alignment, and maintaining the glide path, adhering to any limitations of the automation system.
☐ Postflight Procedures	Conduct a postflight inspection and secure the aircraft.

Completion Standards: The learner must demonstrate proficiency in using approach charts, adhere to ATC approach clearances, and accurately perform approach and missed approach procedures for GPS approaches. The learner must maintain precise control throughout the approach, ensuring the following tolerances: altitude within ±100 feet, airspeed within ±10 knots (or +10/-0 knots as appropriate), heading within ±10 degrees, and CDI deflection not exceeding 3/4-scale. Additionally, the learner should demonstrate proper holding pattern entries, and effectively manage any inoperative equipment scenarios during the approach.

Completion Date **Flight Time** **Instructor Signature**

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Lesson 20 - PAR and ASR Instrument Approach Procedures

Objective: The objective of this lesson is to develop the learner's proficiency in performing Precision Approach Radar (PAR) and Airport Surveillance Radar (ASR) instrument approaches. This includes understanding and interpreting approach procedure charts, complying with ATC approach clearances, and executing various segments of the approach, missed approaches, and circling approaches. Learners will also practice handling inoperative navigation equipment, using radar vectoring during approaches, conducting thorough approach briefings, and using the autopilot during PAR and ASR approaches.

Instructor Note: *The instructor may simulate ATC instructions if PAR or ASR approaches are unavailable.*

Lesson Requirements **Study Resources:** GS: Sec 5 IPH: Ch 4

Task	Description
☐ Review Previous Lesson	Review and reinforce tasks from prior lesson(s) to build proficiency.
☐ Preflight Preparation and Procedures	Review weather information, ensure all certificates and documents are in order, and review aircraft logbooks. Use appropriate checklists to complete the preflight inspection ensuring the functionality of all aircraft systems, flight instruments, and navigation equipment.
☐ Instrument Preflight Inspection	Conduct a thorough preflight inspection, using appropriate checklists, and ensuring the functionality of all flight instruments and navigation systems.
☐ Approach Briefing	Conduct a thorough approach briefing to ensure understanding and readiness.
☐ ATC Approach Clearances	Understand and comply with ATC approach clearances specific to PAR and ASR approaches.
☐ Radar Vectoring	Respond to and follow radar vectoring instructions from ATC during the approach.
☐ Inoperative Navigation Equipment	Handle situations involving inoperative navigation equipment or radar anomalies.
☐ PAR Instrument Approach Procedures	Perform approaches using Precision Approach Radar, maintaining accuracy throughout all segments of the approach.
☐ ASR Instrument Approach Procedures	Perform approaches using Airport Surveillance Radar, maintaining accuracy throughout all segments of the approach.
☐ Missed Approach	Execute missed approach procedures as published, including correctly identifying the missed approach point as instructed by ATC and transitioning to the missed approach segment.
☐ Landing from an Instrument Approach	Complete the landing from an instrument approach, ensuring a safe transition from instrument to visual references.
☐ Using Autopilot for PAR and ASR Approaches	Utilize the autopilot to manage the aircraft throughout all segments of the PAR and ASR approaches, including descent, alignment, and maintaining the glide path, adhering to any limitations of the automation system.
☐ Postflight Procedures	Conduct a postflight inspection and secure the aircraft.

Completion Standards: The learner must demonstrate proficiency in using approach charts, adhere to ATC approach clearances, and accurately perform approach and missed approach procedures for PAR and ASR approaches. The learner must maintain precise control throughout the approach, ensuring the following tolerances: altitude within ±100 feet, airspeed within ±10 knots (or +10/-0 knots as appropriate), heading within ±10 degrees, and CDI deflection not exceeding 3/4-scale. Additionally, the learner should demonstrate proper holding pattern entries, and effectively manage any inoperative equipment scenarios during the approach.

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Completion Date **Flight Time** **Instructor Signature**

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Lesson 21 - Departure Procedures (ODP, SIDs)

Objective: The objective of this lesson is to develop the learner's understanding and proficiency in executing Obstacle Departure Procedures (ODP) and Standard Instrument Departures (SIDs). This includes interpreting departure procedure charts, conducting preflight planning and briefings, executing the procedures, and utilizing automation systems effectively. Learners will also practice maintaining effective communication with ATC and handling abnormal situations during departures.

Lesson Requirements **Study Resources:** GS: Sec 3 IFH: Ch 1, 10 IPH: Ch 1

Task	Description
☐ Review Previous Lesson	Review and reinforce tasks from prior lesson(s) to build proficiency.
☐ Preflight Preparation and Procedures	Review weather information, ensure all certificates and documents are in order, and review aircraft logbooks. Use appropriate checklists to complete the preflight inspection ensuring the functionality of all aircraft systems, flight instruments, and navigation equipment.
☐ Instrument Preflight Inspection	Conduct a thorough preflight inspection, using appropriate checklists, and ensuring the functionality of all flight instruments and navigation systems.
☐ Understanding ODPs	Learn the purpose and importance of Obstacle Departure Procedures and how to interpret them.
☐ Understanding SIDs	Understand Standard Instrument Departures, their components, and how to interpret SID charts.
☐ Briefing Departure Procedures	Perform a comprehensive briefing of the departure procedures to ensure all details are understood.
☐ Executing an ODP	Practice executing an Obstacle Departure Procedure, maintaining prescribed altitudes, headings, and speeds.
☐ Executing a SID	Practice executing a Standard Instrument Departure, following the published route and instructions.
☐ Navigating with Automation	Utilize autopilot and other automation systems to assist in navigating departure procedures, adhering to any limitations of the systems.
☐ ATC Communications	Maintain clear and effective communication with ATC during departure procedures, including readbacks and position reports.
☐ Handling Abnormal Situations	Learn to handle abnormal situations and emergencies during departures, including loss of communication and navigation system failures.
☐ Post Departure Transition	Understand and execute the transition from the departure procedure to en-route navigation, ensuring a smooth handoff.
☐ Postflight Procedures	Conduct a postflight inspection and secure the aircraft.

Completion Standards: The learner must demonstrate a thorough understanding and ability to execute ODPs and SIDs. The learner must maintain control throughout the departure, adhering to the following tolerances: maintaining altitude within ±100 feet, airspeed within ±10 knots (or +10/-0 knots as appropriate), heading within ±10 degrees, and rate of climb/descent within ±200 fpm. Additionally, the learner should effectively use automation systems, communicate clearly with ATC, and manage any abnormal situations that may arise during the departure.

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Completion Date **Flight Time** **Instructor Signature**

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Lesson 22 - Arrival Procedures (STARs)

Objective: The objective of this lesson is to develop the learner's understanding and proficiency in executing Standard Terminal Arrival Routes (STARs). This includes interpreting STAR charts, conducting preflight planning and briefings, executing the procedures, and utilizing automation systems effectively. Learners will also practice maintaining effective communication with ATC, handling abnormal situations during arrivals, and transitioning smoothly to the instrument approach.

Lesson Requirements **Study Resources:** GS: Sec 3 IFH: Ch 1, 10 IPH: Ch 3

Task	Description
☐ Review Previous Lesson	Review and reinforce tasks from prior lesson(s) to build proficiency.
☐ Preflight Preparation and Procedures	Review weather information, ensure all certificates and documents are in order, and review aircraft logbooks. Use appropriate checklists to complete the preflight inspection ensuring the functionality of all aircraft systems, flight instruments, and navigation equipment.
☐ Instrument Preflight Inspection	Conduct a thorough preflight inspection, using appropriate checklists, and ensuring the functionality of all flight instruments and navigation systems.
☐ Understanding STARs	Learn the purpose and importance of Standard Terminal Arrival Routes and how to interpret STAR charts.
☐ STAR Chart Interpretation	Develop proficiency in reading and interpreting the various elements of STAR charts, including waypoints, altitudes, and speed restrictions.
☐ Briefing Arrival Procedures	Perform a comprehensive briefing of the arrival procedures to ensure all details are understood.
☐ Executing a STAR	Practice executing a Standard Terminal Arrival Route, maintaining prescribed altitudes, headings, and speeds.
☐ Navigating with Automation	Utilize autopilot and other automation systems to assist in navigating arrival procedures, adhering to any limitations of the systems.
☐ ATC Communications	Maintain clear and effective communication with ATC during arrival procedures, including readbacks and position reports.
☐ Handling Abnormal Situations	Learn to handle abnormal situations and emergencies during arrivals, including loss of communication and navigation system failures.
☐ Transition to Approach	Understand and execute the transition from the arrival procedure to the instrument approach, ensuring a smooth handoff.
☐ Altitude and Speed Management	Manage altitude and speed changes during the arrival to meet all restrictions and ensure a stabilized approach.
☐ Postflight Procedures	Conduct a postflight inspection and secure the aircraft.

Completion Standards: The lesson will be successfully completed when the learner demonstrates a thorough understanding and ability to execute STARs. The learner must maintain control throughout the arrival, adhering to the following tolerances: maintaining altitude within ±100 feet, airspeed within ±10 knots (or +10/-0 knots as appropriate), heading within ±10 degrees, and rate of climb/descent within ±200 fpm. Additionally, the learner should effectively use automation systems, communicate clearly with ATC, and manage any abnormal situations that may arise during the arrival.

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Completion Date **Flight Time** **Instructor Signature**

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Lesson 23 - Comprehensive Approach Techniques (Review)

Objective: The objective of this lesson is to review and practice all types of precision and non-precision instrument approach procedures. Learners will correlate various tasks for each phase of the approach and incorporate all approach phases, including departure procedures (ODP and SID), arrival procedures (STAR), approaches, landing from an approach, circling approach, and missed approach. This comprehensive review aims to ensure proficiency and readiness for more advanced instrument flying.

Lesson Requirements **Study Resources:** GS: Sec 3, 5 IFH: Ch 1, 9, 10 IPH: Ch 1, 3, 4

Task	Description
☐ Review Previous Lesson	Review and reinforce tasks from prior lesson(s) to build proficiency.
☐ Preflight Preparation and Procedures	Review weather information, ensure all certificates and documents are in order, and review aircraft logbooks. Use appropriate checklists to complete the preflight inspection ensuring the functionality of all aircraft systems, flight instruments, and navigation equipment.
☐ Instrument Preflight Inspection	Conduct a thorough preflight inspection, using appropriate checklists, and ensuring the functionality of all flight instruments and navigation systems.
☐ Review Procedure Turns	Revisit and practice procedure turns and course reversals.
☐ Review DME Arcs	Practice executing DME arcs as part of various approach procedures.
☐ Approach Briefing	Conduct thorough approach briefings to ensure understanding and readiness for each type of approach.
☐ ATC Approach Clearances	Understand and comply with ATC approach clearances for both precision and non-precision approaches.
☐ Radar Vectoring	Follow radar vectoring instructions from ATC during different types of approaches.
☐ Inoperative Navigation Equipment	Handle situations involving inoperative navigation equipment or anomalies during approaches.
☐ VOR Instrument Approach Procedures	Perform VOR instrument approaches, maintaining accuracy throughout all segments.
☐ Localizer Instrument Approach Procedures	Execute localizer-based instrument approaches with precision.
☐ ILS Instrument Approach Procedures	Conduct ILS instrument approaches, ensuring alignment and glide path accuracy.
☐ GPS Instrument Approach Procedures	Perform GPS-based instrument approaches, adhering to procedure requirements.
☐ PAR and ASR Instrument Approach Procedures	Execute PAR and ASR approaches, following radar guidance and instructions.
☐ Missed Approach	Execute missed approach procedures, including identifying the missed approach point and transitioning appropriately.
☐ Circling Approach	Perform circling approaches as required, ensuring a safe transition from instrument to visual references.
☐ Landing from an Instrument Approach	Complete landings from various instrument approaches, ensuring smooth transitions and adherence to landing protocols.
☐ Automation Management	Utilize autopilot and other automation systems for managing aircraft during approaches, adhering to limitations.
☐ Departure Procedures (ODP, SIDs)	Review and execute Obstacle Departure Procedures and Standard Instrument Departures accurately.
☐ Arrival Procedures (STARs)	Understand and perform Standard Terminal Arrival Routes, ensuring smooth transitions to approaches.
☐ Postflight Procedures	Conduct a postflight inspection and secure the aircraft.

Completion Standards: The learner must demonstrate proficiency in executing all types of precision and non-precision instrument approaches, including associated departure and arrival procedures. The learner must maintain control throughout each phase, adhering to the following tolerances: maintaining altitude within ±100 feet, airspeed within ±10 knots (or +10/-0 knots as appropriate), heading within ±10 degrees, and rate of climb/descent within ±200 fpm. Additionally, the learner should effectively use automation systems, communicate clearly with ATC, and manage any abnormal situations during the procedures.

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Completion Date **Flight Time** **Instructor Signature**

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Lesson 24 - Stage Three Check

Objective: The objective of this lesson is to evaluate the learner's proficiency in all instrument skills learned in Stage Three. This stage check assesses the learner's ability to perform all relevant maneuvers and procedures effectively, ensuring they are prepared for more advanced training. The focus is on confirming proficiency, readiness to progress, and adherence to performance standards and safety protocols.

Lesson Requirements

Task	Task
☐ Preflight Preparation and Procedures	☐ Radar Vectoring
☐ ATC Approach Clearances	☐ Inoperative Navigation Equipment
☐ Approach Briefing	☐ Missed Approach
☐ Procedure Turns	☐ Circling Approach
☐ DME Arcs	☐ Landing from an Instrument Approach
☐ VOR Instrument Approach Procedures	☐ Automation Management
☐ Localizer Instrument Approach Procedures	☐ Departure Procedures (ODP, SIDs)
☐ ILS Instrument Approach Procedures	☐ Arrival Procedures (STARs)
☐ GPS Instrument Approach Procedures	☐ Postflight Procedures
☐ PAR and ASR Instrument Approach Procedures	

Completion Standards: The lesson and Stage Three are complete when the learner exhibits proficiency in all instrument approach and navigation skills covered in Stage Three. The learner must maintain control of the aircraft at all times, adhering to the following tolerances: maintaining altitude within ±100 feet, airspeed within ±10 knots (or +10/-0 knots as appropriate), heading within ±10 degrees, and rate of climb/descent within ±200 fpm. Additionally, the learner should effectively use automation systems, communicate clearly with ATC, and manage any abnormal situations during the procedures. The learner must perform all maneuvers without instructor assistance, demonstrating readiness for more advanced training and adherence to all safety protocols.

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Completion Date **Flight Time** **Instructor Signature**

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Stage 4 - Cross-Country and Advanced Procedures

Objective: The objective of Stage 4 is to refine and consolidate the learner's mastery of all required instrument flight maneuvers and operational procedures in preparation for the FAA practical test. This stage begins with an in-depth review of IFR emergency procedures and cross-country planning, followed by a dual IFR cross-country training flight. The stage continues with a comprehensive skills review to identify and address any areas needing improvement. The focus throughout is on ensuring learners can consistently meet or exceed FAA Airman Certification Standards, demonstrating robust instrument flight proficiency and operational safety as they prepare for the practical test. The stage culminates in the Stage Four Check and the End-of-Course Test - Mock Checkride.

Lesson	Title
25	IFR Emergency Procedures
26	IFR Cross-Country Planning and Procedures
27	IFR Cross-Country Flight
28	Comprehensive Skills Review
29	Stage Four Check
30	End-of-Course Test and Mock Checkride

Completion Standards: Stage 4 will be considered complete when the learner successfully passes the Stage Four Check and the End-of-Course Test - Mock Checkride, demonstrating a high level of proficiency in all instrument flight maneuvers and adherence to FAA standards. The learner must show exceptional ability in managing cross-country IFR operations, effectively handling emergency procedures, and navigating various flight scenarios. The learner must consistently perform all maneuvers with precision and confidence, maintaining tight tolerances in accordance with the FAA Airmen Certification Standards. Additionally, the learner must exhibit a comprehensive understanding and application of the knowledge areas pertinent to the instrument rating, demonstrating readiness for the FAA practical test. Successful completion of this stage signifies that the learner is fully prepared to undertake and pass the checkride, qualifying them for the Instrument Rating.

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Lesson 25 - IFR Emergency Procedures

Objective: The objective of this lesson is to develop the learner's ability to handle a wide range of abnormal system conditions and emergency situations under IFR conditions. This includes practicing emergency operations, managing communication and equipment failures, handling adverse weather conditions such as turbulence and icing, and executing appropriate emergency procedures to ensure the safety and control of the aircraft.

Lesson Requirements **Study Resources:** GS: Sec 4, 7, 8 IFH: Ch 11 IPH: Ch 1, 2, 3, Appendix A

Task	Description
☐ Review Previous Lesson	Review and reinforce tasks from prior lesson(s) to build proficiency.
☐ Preflight Preparation and Procedures	Review weather information, ensure all certificates and documents are in order, and review aircraft logbooks. Use appropriate checklists to complete the preflight inspection ensuring the functionality of all aircraft systems, flight instruments, and navigation equipment.
☐ Emergency Operations	Practice various emergency operations under IFR conditions, ensuring the ability to handle unexpected situations.
☐ Loss of Communications	Learn procedures to follow in case of communication failure with ATC, including proper transponder settings and route planning.
☐ Instrument, System, and Equipment Failures	Handle failures of critical flight instruments, systems, and equipment, maintaining control and navigation.
☐ Partial Panel Approaches	Perform approaches solely by reference to instruments with the loss of primary flight control instruments, maintaining accuracy and control throughout the approach.
☐ Turbulence	Recognize and manage turbulence, ensuring passenger safety and maintaining aircraft control.
☐ Icing Awareness, Recognition, Correction, and Prevention	Identify and manage icing conditions, applying appropriate correction and prevention measures.
☐ Engine Failure	Practice procedures for handling engine failures, including single-engine operations if training in a multi-engine aircraft.
☐ Low Fuel Status	Develop procedures for managing low fuel situations, including diversion planning and fuel conservation techniques.
☐ Electrical Failure	Handle electrical failures, ensuring continued safe operation and navigation under IFR conditions.
☐ Avionics Failure	Manage failures of avionics systems, including backup procedures and manual navigation techniques.
☐ Emergency Descent	Practice emergency descent procedures to rapidly lose altitude in response to depressurization or other emergencies.
☐ Smoke and Fire	Develop procedures for handling smoke and fire in the flight deck, ensuring safety and rapid response.
☐ Postflight Procedures	Conduct a postflight inspection and secure the aircraft.

Completion Standards: The learner must demonstrate proficiency in managing IFR emergency situations. The learner must maintain control of the aircraft throughout each emergency scenario, adhering to the following tolerances: maintaining altitude within ±100 feet, airspeed within ±10 knots (or +10/-0 knots as appropriate), heading within ±10 degrees, and rate of climb/descent within ±200 fpm. Additionally, the learner should effectively communicate with ATC during emergencies, use appropriate procedures to manage equipment failures, and handle abnormal situations with confidence and competence.

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Completion Date **Flight Time** **Instructor Signature**

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Lesson 26 - IFR Cross-Country Planning and Procedures

Objective: The objective of this lesson is to develop the learner's comprehensive IFR cross-country planning and in-flight navigation skills. This includes gathering and interpreting weather information, creating detailed flight plans, managing ATC clearances, and executing all phases of an IFR cross-country flight. Learners will also practice calculating ETEs and ETAs, managing fuel, and making necessary in-flight adjustments to ensure a safe and efficient flight.

Instructor Note: *This lesson may be completed locally or optionally as a round robin cross-country fight. This lesson may not be completed in an FSTD or ATD if conducted as a cross-country flight.*

Lesson Requirements

Study Resources: GS: Sec 1, 3, 4, 5, 6 IFH: Ch 1, 2, 9, 10, 11 IPH: Ch 1, 2, 3, 4, 6

Task	Description
☐ Review Previous Lesson	Review and reinforce tasks from prior lesson(s) to build proficiency.
☐ Preflight Preparation	Review weather information, ensure all certificates and documents are in order, and review aircraft logbooks. Prepare a detailed flight plan, including route selection, fuel requirements, alternate airports, and contingency planning.
☐ Preflight Procedures	Use appropriate checklists to complete the preflight inspection ensuring the functionality of all aircraft systems, flight instruments, and navigation equipment.
☐ Meteorological Analysis	Gather and interpret weather information relevant to the planned cross-country flight, including METARs, TAFs, and NOTAMs.
☐ Cross-Country Flight Planning	Develop a comprehensive flight plan that includes route selection, alternates, fuel requirements, and contingency plans.
☐ Air Traffic Control Clearances and Procedures	Copy, read back, and comply with IFR clearances from ATC, ensuring all instructions are understood and followed.
☐ Departure, En Route, and Arrival Operations	Execute all phases of the IFR cross-country flight, including departure procedures, en route navigation, and arrival procedures.
☐ Calculating ETEs and ETAs	Calculate Estimated Time En Route (ETE) and Estimated Time of Arrival (ETA) based on planned route, speed, and wind conditions.
☐ En Route Course Changes	Manage and execute course changes as instructed by ATC or due to weather and other in-flight conditions.
☐ Alternate Airports	Identify and plan for alternate airports, including diversion procedures and requirements.
☐ Fuel Management	Monitor and manage fuel consumption throughout the flight, ensuring adequate reserves and efficient use of fuel.
☐ In-Flight Navigation Adjustments	Make necessary adjustments to navigation and flight plan based on real-time conditions and ATC instructions.
☐ Automation Use	Utilize autopilot and other navigation aids to assist in maintaining the planned route and managing workload.
☐ Contingency Planning	Develop and implement contingency plans for unexpected situations, such as weather changes, equipment malfunctions, or diversions.
☐ Postflight Procedures	Conduct a postflight inspection and secure the aircraft.

Completion Standards: The learner must demonstrate proficiency in IFR cross-country flight planning and execution. The learner must maintain control throughout the flight, adhering to the following tolerances: maintaining altitude within ±100 feet, airspeed within ±10 knots (or +10/-0 knots as appropriate), heading within ±10 degrees, and rate of climb/descent within ±200 fpm. Additionally, the learner should effectively manage ATC clearances, make accurate in-flight navigation adjustments, and handle any unexpected situations with confidence and competence.

Completion Date **Flight Time** **Instructor Signature**

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Lesson 27 - IFR Cross-Country Flight

Objective: The objective of this lesson is to conduct an IFR cross-country training flight, emphasizing navigation and approach skills over a distance of at least 250 nautical miles with one segment of at least 100 nautical miles. This flight will involve planning and executing all phases of an IFR cross-country flight, including handling emergencies and abnormal conditions. Learners will practice precision and nonprecision approaches, missed approaches, and transitioning from instrument to visual flight.

Instructor Note: *This lesson may not be completed in an FSTD or ATD.*

Lesson Requirements

Study Resources: GS: Sec 1, 3, 4, 5, 6 IFH: Ch 1, 2, 9, 10, 11 IPH: Ch 1, 2, 3, 4, 6

Task	Description
☐ Review Previous Lesson	Review and reinforce tasks from prior lesson(s) to build proficiency.
☐ Preflight Preparation	Review weather information, ensure all certificates and documents are in order, and review aircraft logbooks. Prepare a detailed flight plan, including route selection, fuel requirements, alternate airports, and contingency planning.
☐ Preflight Procedures	Use appropriate checklists to complete the preflight inspection ensuring the functionality of all aircraft systems, flight instruments, and navigation equipment.
☐ Meteorological Analysis	Gather and interpret weather information relevant to the cross-country flight, including METARs, TAFs, and NOTAMs.
☐ Cross-Country Flight Planning	Develop a comprehensive flight plan that includes route selection, alternates, fuel requirements, and contingency plans.
☐ Instrument Takeoff	Perform an instrument takeoff, transitioning smoothly from visual to instrument flight references.
☐ Flying a SID	Execute a Standard Instrument Departure, following the published route and instructions.
☐ Air Traffic Control Clearances and Procedures	Copy, read back, and comply with IFR clearances from ATC, ensuring all instructions are understood and followed.
☐ Departure, En Route, and Arrival Operations	Execute all phases of the IFR cross-country flight, including departure procedures, en route navigation, and arrival procedures.
☐ Calculating ETEs and ETAs	Calculate Estimated Time En Route (ETE) and Estimated Time of Arrival (ETA) based on planned route, speed, and wind conditions.
☐ En Route Course Changes	Manage and execute course changes as instructed by ATC or due to weather and other in-flight conditions.
☐ Compliance with ATC Clearances	Ensure strict adherence to ATC clearances throughout the flight, including altitude, speed, and routing instructions.
☐ Holding Procedures	Execute holding procedures as directed by ATC or as required by the flight plan.
☐ Flying a STAR	Perform a Standard Terminal Arrival Route, ensuring compliance with all published altitudes and speeds.
☐ Precision Approach	Conduct a precision approach, such as an ILS, ensuring accuracy and adherence to glide path and localizer indications.
☐ Nonprecision Approach	Perform nonprecision approaches, ensuring accuracy and adherence to approach procedures for at least two different types.
☐ Missed Approach	Execute missed approach procedures, including identifying the missed approach point and transitioning appropriately.
☐ Landing from an Instrument Approach	Complete the landing from an instrument approach, ensuring a smooth transition from instrument to visual references.
☐ Simulating IFR Emergencies	Practice handling simulated IFR emergencies and abnormal conditions, including equipment failures and adverse weather.
☐ Postflight Procedures	Conduct a postflight inspection and secure the aircraft.

Completion Standards: The learner must demonstrate proficiency in conducting an IFR cross-country flight, including planning, executing, and managing all phases of the flight. The learner must maintain control throughout the flight, adhering to the following tolerances: maintaining altitude within ±100 feet, airspeed within ±10 knots (or +10/-0 knots as appropriate), heading within ±10 degrees, and rate of climb/descent within ±200 fpm. Additionally, the learner should effectively manage ATC clearances, execute holding procedures, and handle simulated IFR emergencies and abnormal conditions with confidence and competence. The flight must meet the regulatory requirements under 14 CFR 141 for instrument training, including an instrument approach at each airport and three different kinds of approaches using navigation systems.

Completion Date _____ **Flight Time** _____ **Instructor Signature** _____

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Lesson 28 - Comprehensive Skills Review

Objective: The objective of this lesson is to review all instrument flight skills, focusing on areas needing improvement. This comprehensive review will cover all phases of instrument training, from basic attitude instrument flying to advanced navigation and approach procedures. The lesson aims to evaluate the learner's proficiency, identify strengths and weaknesses, and provide additional instruction as necessary to ensure readiness for the stage check and end-of-course check.

Lesson Requirements

Study Resources: GS: IFR Know it All Cheat Sheet

Task	Description
☐ Preflight Preparation and Procedures	Review weather information, ensure all certificates and documents are in order, and review aircraft logbooks. Use appropriate checklists to complete the preflight inspection ensuring the functionality of all aircraft systems, flight instruments, and navigation equipment.
☐ Meteorological Analysis	Gather and interpret weather information relevant to IFR flights, including METARs, TAFs, and NOTAMs.
☐ Cross-Country Flight Planning	Develop comprehensive flight planning, including route selection, alternates, fuel requirements, and contingency plans.
☐ Attitude Instrument Flying	Maintain and adjust aircraft attitude solely by reference to instruments.
☐ Instrument Takeoff	Perform instrument takeoff procedures, transitioning smoothly from visual to instrument flight references.
☐ Instrument Flight Patterns	Execute standard instrument flight patterns to develop consistency and precision.
☐ Departure Procedures (ODP, SIDs)	Execute Obstacle Departure Procedures and Standard Instrument Departures.
☐ VOR Navigation Techniques	Navigate using VOR systems, including intercepting and tracking radials.
☐ GPS Navigation Techniques	Use basic and advanced GPS navigation, including intercepting and tracking GPS courses.
☐ Holding Procedures	Execute holding procedures using various navigation systems, including VOR, DME, and GPS.
☐ Arrival Procedures (STARs)	Perform Standard Terminal Arrival Routes, ensuring smooth transitions to approaches.
☐ Instrument Approach Procedures	Conduct various instrument approaches, including VOR, localizer, ILS, and GPS approaches.
☐ Missed Approach Procedures	Execute missed approach procedures, including identifying the missed approach point.
☐ Circling Approach	Perform circling approaches, ensuring safe transition from instrument to visual references.
☐ Landing from an Instrument Approach	Complete the landing phase from an instrument approach, ensuring a smooth transition from instrument to visual references and executing a safe landing.
☐ Partial-Panel Instrument Flying	Fly the aircraft using a limited set of instruments to simulate instrument failures and abnormal system conditions.
☐ Automation Management	Utilize and manage the autopilot and other automation systems to assist in maintaining a planned route and reducing workload.
☐ Emergency Operations	Handle various emergency operations under IFR conditions, ensuring the ability to manage unexpected situations.
☐ Postflight Procedures	Conduct a postflight inspection and secure the aircraft.

Completion Standards: The learner must demonstrate proficiency in all reviewed instrument flight skills. The learner must maintain control throughout each task, adhering to the following tolerances: maintaining altitude within ±100 feet, airspeed within ±10 knots (or +10/-0 knots as appropriate), heading within ±10 degrees, and rate of climb/descent within ±200 fpm. Additionally, the learner should make accurate in-flight navigation adjustments, and handle any unexpected situations with confidence and competence. This lesson may be conducted over multiple sessions and repeated as necessary to ensure the learner's readiness for the stage check and end-of-course check.

Completion Date _____ **Flight Time** _____ **Instructor Signature** _____

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Lesson 29 - Stage Four Check

Objective: The objective of this lesson is to evaluate the learner's proficiency in cross-country and advanced procedures learned in Stage Four. This stage check assesses the learner's comprehension and ability to correlate and apply the skills taught in the stage 4 lessons. The learner's ability to perform all maneuvers and procedures effectively will be assessed, ensuring they are ready for the final end-of-course check and mock checkride. The focus is on confirming proficiency and readiness to progress, emphasizing adherence to performance standards and safety protocols.

Lesson Requirements

Task	Task
☐ Preflight Preparation and Procedures	☐ Nonprecision Approach
☐ Meteorological Analysis	☐ Missed Approach
☐ IFR Cross-Country Planning and Procedures	☐ Holding Procedures
☐ IFR Cross-Country Flight	☐ Automation Management
☐ Departure Procedures (ODP, SIDs)	☐ Landing from an Instrument Approach
☐ Arrival Procedures (STARs)	☐ IFR Emergency Procedures
☐ Precision Approach	☐ Postflight Procedures

Completion Standards: The lesson and Stage Four are complete when the learner exhibits proficiency in all required tasks, including cross-country planning and execution, emergency procedures, and advanced navigation techniques. The learner must maintain control of the aircraft throughout each task, adhering to the following tolerances: maintaining altitude within ±100 feet, airspeed within ±10 knots (or +10/-0 knots as appropriate), heading within ±10 degrees, and rate of climb/descent within ±200 fpm. Completion of this lesson ensures the learner's readiness for the final end-of-course check and mock checkride, with both the learner and instructor confident in their preparedness for the practical test.

_____ _____ _____

Completion Date **Flight Time** **Instructor Signature**

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Lesson 30 - End-of-Course Test and Mock Checkride

Objective: The objective of this lesson is to conduct a comprehensive evaluation and assessment of all skills required for the instrument rating practical test. This includes aircraft operation, flight planning, navigation, and emergency management. The mock checkride will simulate the FAA practical test, evaluating all required maneuvers and procedures to verify the learner's readiness for obtaining the instrument rating. This thorough review and evaluation ensures that the learner can confidently perform all required maneuvers and procedures, demonstrating the proficiency expected of an instrument-rated pilot.

***Note to Instructors**: This lesson should be completed within 60 days preceding the date of the practical test.*

Lesson Requirements **Study Resources:** GS: IFR Know it All Cheat Sheet

Task	Task
☐ Preflight Preparation and Procedures	☐ DME Arc
☐ Meteorological Analysis	☐ Nonprecision Approaches
☐ Cross-Country Flight Planning	☐ Precision Approach
☐ Airplane Systems Related to IFR Operations	☐ Missed Approach
☐ IFR Flight Instruments and Navigation Equipment	☐ Circling Approach
☐ Instrument Flight Deck Check	☐ Landing from an Instrument Approach
☐ Air Traffic Control Clearances and Procedures	☐ IFR Emergency Procedures
☐ Departure, En Route, and Arrival Operations	☐ Loss of Communications
☐ Holding Procedures	☐ Loss of Primary Instruments
☐ Attitude Instrument Flight Maneuvers	☐ Automation Management
☐ Magnetic Compass Turns	☐ Checking Instruments and Equipment
☐ Recovery from Unusual Attitudes	☐ Postflight Procedures
☐ Intercepting and Tracking Navigation Systems	

Completion Standards: The End-of-Course Test will be deemed successfully completed when the learner can precisely execute all tasks according to the FAA Instrument Rating Airman Certification Standards. The learner must maintain control of the aircraft throughout each task, adhering to the following tolerances: maintaining altitude within ±100 feet, airspeed within ±10 knots (or +10/-0 knots as appropriate), heading within ±10 degrees, and rate of climb/descent within ±200 fpm. Maintain a stabilized final approach from the final approach fix to the DA/DH allowing no more than 3/4 scale deflection of either the vertical or lateral guidance indications and maintain the desired airspeed plus ±10 knots. Additionally, the learner should intercept and track a GPS course with no more than a 3/4-scale deflection of the CDI, maintain lateral course within ±2 NM, and perform all maneuvers and procedures without the performance or outcome of the flight being in doubt. If any areas are found deficient, additional instruction will be recommended. Successful completion of this lesson indicates the learner's preparedness to complete the FAA practical test.

Completion Date **Flight Time** **Instructor Signature**

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Appendix A: Enrollment and Graduation Certificates

Enrollment Certificate

This is to certify that

_____

Learner Name

is enrolled in the Federal Aviation Administration approved Instrument Rating Certification Course

conducted by

_____

School Name and Certificate Number

_____ _____

Chief Instructor *Enrollment Date*

Graduation Certificate

This is to certify that

_____

Learner Name and Number

has satisfactorily completed the course requirements, stages and tests, received _____ hours of cross-country training, and has graduated from the Federal Aviation Administration approved Instrument Rating Certification Course

conducted by

_____

School Name and Certificate Number

_____ _____

Chief Instructor *Date of Graduation*

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Appendix B: Endorsements

Knowledge Test

1. Aeronautical knowledge test: § 61.35(a)(1), 61.65(a) and (b)
I certify that _____ [First name, MI, Last name] has received the required training of § 61.65.(b) I have determined that [he or she] is prepared for the Instrument-Airplane knowledge test.
_____ [date] _____ [CFI Signature] _____ [CFI #] _____ [expiration date]

Practical Test

1. Flight proficiency/practical test: § 61.65(a)(6)
I certify that _____ [First name, MI, Last name] has received the required training of § 61.65(c) and (d). I have determined [he or she] is prepared for the Instrument-Airplane practical test.
_____ [date] _____ [CFI Signature] _____ [CFI #] _____ [expiration date]

2. Prerequisites for instrument practical test: § 61.39(a)
I certify that _____ [First name, MI, Last name] has received and logged the required flight time/training of § 61.39(a) in preparation for the practical test within 2 calendar-months preceding the date of the test and has satisfactory knowledge of the subject areas in which [he or she] was deficient by the FAA Airman Knowledge Test report. I have determined [he or she] is prepared for the Instrument-Airplane practical test.
_____ [date] _____ [CFI Signature] _____ [CFI #] _____ [expiration date]

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