

Instrument Pilot Ground Instruction Lesson Plan

Air Traffic Control Clearances

Student: _____ Date: _____

Objectives:

Upon completion of this lesson, the student will:

- Be able copy and correctly readback air traffic control clearances in a timely manner, using standard phraseology.
- Be able to determine whether or not it is possible to comply with an ATC clearance.
- Know how to set communications and navigation equipment based on ATC clearances.

Elements:

- ATC Clearances
 - Clearance limits and EFC times
 - Departure procedure and frequency
 - Route of flight
 - Altitude assignments and restrictions
 - Transponder code
 - Clearance void time
- Holding instructions
- Clearance readback
- Clearance shorthand notation

Schedule:

• Pre-lesson briefing	00:05
• Elements of the standard clearance	00:10
• Clearance shorthand	00:10
• Practice copying and reading back ATC clearances	00:10
• Holding instructions	00:10
• Practice copying and reading back holding instructions	00:05
• Post-lesson debriefing	00:10
Total:	01:00

Equipment:

- CRAFT – RVR Forms
- Appropriate Departure procedure, STARs and Approach charts.
- Appropriate IFR en-route charts.

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Instructor Actions:

1. Pre-lesson briefing
 - Present lesson objective and outline of the lesson.
2. Discuss the information contained in a standard ATC clearance:
 - Clearance Limit
 - Route of flight (including departure procedure)
 - Altitude (initial, final, crossing restrictions)
 - Frequency for Departure control (or controlling agency)
 - Transponder Code
 - Release time
 - Void time
 - Recall time
3. Demonstrate the use of shorthand notations for copying clearance information and explain the CRAFT – RVR form.
4. Give the student example clearances and have the student copy them and read them back.
 - Coach the student through determining whether or not it will be possible to comply with the clearance.
 - Can the student's airplane meet minimum climb rate requirements?
 - Does the student's airplane have all of the necessary navigation equipment?
5. Explain holding instructions.
 - Published holds.
 - Ad-lib holds (standard and non-standard).
 - EFC time.
 - Reporting requirements.
 - Lost communications procedures.
6. Give the student example holding instructions and have the student copy them and read them back.
7. Post Lesson Debriefing
 - Critique student's performance of tasks with constructive suggestions to improve technique.
 - Answer student questions.
 - Ask student questions to evaluate what was learned.
 - Explain what will be covered in the next lesson and assign reading material.

Student Actions:

1. Pre-lesson briefing
 - Ask questions concerning previous lessons and/or this one.
2. Discuss the information contained in a standard ATC clearance.
 - Ask questions related to the information contained in a standard ATC clearance.
3. Demonstrate the use of shorthand notations for copying clearance information and explain the CRAFT – RVR form.
 - Practice writing ATC clearances in shorthand notation.

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4. Practice receiving, copying and reading back ATC clearances.
 - Use the CRAFT – RVR form for copying ATC clearances.
 - Use shorthand notation to write clearance information.
 - Readback clearance accurately in a timely manner.
5. Holding instructions.
 - Ask questions related to the elements of holding instructions.
6. Practice receiving, copying and reading back holding instructions.
 - Use shorthand notation to write clearance information.
 - Readback clearance accurately in a timely manner
7. Post-flight debriefing.
 - Ask questions about the lesson.

Completion Standards:

This lesson will be completed when the student is able to receive, copy and readback ATC clearances and holding instructions accurately in a timely manner.

Common Errors:

- Student misses parts of the clearance.
- Student fails to ask for clarification when parts of the clearance are not completely understood.
- Student fails to ask for an EFC time from a hold if one is not specified in the holding instruction.

References:

- Instrument Flying Handbook (FAA-H-8083-15); Chapters 9 and 10
- INSTRUMENT PTS Area of Operation III Tasks A, B, C

Possible Review Questions:

Instructor should give student sample clearances and see that he or she copies and reads them back correctly.