Pilot Training

EC130 B4
Transition Training Course

5 Days / 1 Week

Ground School  18 Hours (3 Days)
Sim        0 Hours
Flight  3 Hours per Student

Approved By: Tim McAdams _________________________ Date: ___/___/______

Rev. 2.1
SCOPE:

This course will provide a complete Initial Pilot Ground School on the H130B4 Helicopter. Classroom instruction, the Pilot Training Manual, and various handouts, will provide complete information for a thorough understanding of the aircraft and its engine and related systems, with emphasis on Flight Manual usage including Normal and Emergency Procedures for the various aircraft systems and the aircraft’s Limitations. Practical exercises will be conducted covering the Flight Manual information on Limitations, Performance Data, and Weight & Balance. Successful completion will be based upon two examinations: A Limitations Quiz & the Final Exam covering overall course content.

OBJECTIVE:

To instill the fundamental knowledge required to conduct safe ground and pre-flight operations of the H130B4 Helicopter. Upon successful completion of this course and the H130B4 Transition Ground School final exam, the student should be able to conduct operations, within the limits of Aircraft Ground School, safely and efficiently.

COURSE PREREQUISITES:

Acceptance into this course is based upon these requirements:

- A current FAA issued Helicopter Pilot Certificate
- Valid Medical Certificate

In special circumstances any of the above requirements may be waived with the approval of Airbus Helicopters, Inc.’s Chief Flight Instructor.

NOTICES:

Airbus Helicopters, Inc. reserves the right to notify customer of the occurrence of any force majeure condition that, in its sole discretion, is the cause of excusable delay. In the event of a force majeure condition, the services and/or classes will be extended or, if required, rescheduled for the first available opening. Airbus Helicopters, Inc. will not be liable for any costs, claims, or damages to customer or its employees arising from delays or interruptions caused by any force majeure condition.

The stated duration of the course is based on two student pilots per course. Additional student pilots may change the duration of the flight portion of the course. Airbus Helicopters Inc. instructor pilots fly a maximum of 4.5 hours per day.
Ground School  

Day 1

Introduction and General Overview of the Helicopter  

SCOPE: This block of instruction will cover registration and orientation to the course, an explanation of the course outline, Airbus Training School Operations and a general overview of the helicopter. The general overview will include the main characteristics, operating publications, description, main dimensions, airframe reference points, special configurations, and the cockpit layout of the helicopter. A Review Questions segment will be conducted on the material presented.

Introduction to the Flight Manual & General Limitations  

NOTE: Before this block of instruction begins, a blank Limitations Quiz will be given to each student to be filled in that evening. The next morning, a closed book Limitations Quiz will be administered.

SCOPE: This block of instruction will cover an introduction to the Rotorcraft Flight Manual and some general aircraft limitations. A Review Questions segment will be conducted on the material presented.

Structure  

SCOPE: This block of instruction will cover the basic structure of the helicopter including the three main structural areas, anti-vibrators, rear structure, tail boom, fenestron, doors, cowlings, fairings, and the skid type landing gear. Additionally covered are all appropriate emergency procedures and caution / warning panel lights, as well as their meaning, and the proper corrective actions to be taken by the pilot. A Review Questions segment will be conducted on the material presented.

Main Rotor Drive System  

SCOPE: This block of instruction will cover the functions of the main rotor drive system, the main gearbox attachment and suspension, the engine to main gearbox coupling, the main gearbox components and lubrication system, main gearbox oil cooling, and the rotor brake components and operation. Additionally covered are all appropriate emergency procedures and caution / warning panel lights, as well as their meaning, and the proper corrective actions to be taken by the pilot. A Review Questions segment will be conducted on the material presented.
Day 1 continued

Main Rotor 1.0 hours

SCOPE: This block of instruction will cover the main rotor, the main rotor mast, the main rotor hub, the main rotor blades, the rotor speed monitoring system, and the vibration absorbers. Additionally covered are all appropriate emergency procedures and caution / warning panel lights, as well as their meaning, and the proper corrective actions to be taken by the pilot. A Review Questions segment will be conducted on the material presented.

Tail Rotor Drive System and Tail Rotor 0.5 hours

SCOPE: This block of instruction will cover the main gearbox to tail rotor drive system and the tail rotor drive shafts and components and the tail rotor drive system characteristics. Furthermore, this block of instruction will cover the tail rotor gear box, the tail rotor gearbox monitoring system, the tail rotor – fenestron, and the tail rotor components. Additionally covered are all appropriate emergency procedures and caution / warning panel lights, as well as their meaning, and the proper corrective actions to be taken by the pilot. A Review Questions segment will be conducted on the material presented.

Day 2

Electrical Power System 1.0 hours

NOTE: Before this block of instruction begins, a closed book Limitations Quiz will be administered.

SCOPE: This block of instruction will cover the EC130 B4 electrical system schematic, direct current power sources, power system components and their functions, layout of the power system components, Master Switch usage, introduction to the VEMD, the electrical master box, direct battery power, the Direct Battery Switch light logic, and the electrical system’s limitations. Additionally covered are all appropriate emergency procedures and caution / warning panel lights, as well as their meaning, and the proper corrective actions to be taken by the pilot. A Review Questions segment will be conducted on the material presented.
Day 2 continued

Flight Controls and Servo Controls 1.0 Hours

SCOPE: This block of instruction will cover the operating principles of the flight controls, the main rotor controls, their operation and their components; the tail rotor controls, their operation and their components; as well as the servo controls and their operation. Additionally covered are all appropriate emergency procedures and caution / warning panel lights, as well as their meaning, and the proper corrective actions to be taken by the pilot. A Review Questions segment will be conducted on the material presented.

Hydraulic System 0.5 Hours

SCOPE: This block of instruction will cover the hydraulic system, its components and their location, technical characteristics, hydraulic system schematics, the component functions, and the hydraulic system normal operation. Additionally covered are all appropriate emergency procedures and caution / warning panel lights, as well as their meaning, and the proper corrective actions to be taken by the pilot. A Review Questions segment will be conducted on the material presented.

Fuel System 1.0 Hours

SCOPE: This block of instruction will cover the fuel system schematic, the fuel system components and their functions; and the fuel system operation, controls, and monitoring. Additionally covered are all appropriate emergency procedures and caution / warning panel lights, as well as their meaning, and the proper corrective actions to be taken by the pilot. A Review Questions segment will be conducted on the material presented.

VEMD and Flight Instruments 1.0 Hours

SCOPE: This block of instruction will consist of a description of the Vehicle and Engine Multifunction Display including the description and component location, the engine / vehicle page, the “start-up” mode, the “flight” operational mode, the test pattern, the engine power check, parameter monitoring, and the flight report. Furthermore, the basic flight instruments are shown, as well as the pitot static system, the principle of operation, the system components, and the location of the pitot static system controls and caution light. Additionally covered are all appropriate emergency procedures and caution / warning panel lights, as well as their meaning, and the proper corrective actions to be taken by the pilot. A Review Questions segment will be conducted on the material presented.
Day 2 continued

Lighting

SCOPE: This block of instruction will cover the interior lighting systems to include the instrument panel and console lighting, the layout of the instrument panel lighting, and the dome lights. Exterior lighting subjects covered are the anti-collision and position lights, as well as the landing and searchlights. A Review Questions segment will be conducted on the material presented.

Day 3

Heating and Demisting

SCOPE: This block of instruction will cover the heating and demisting system, their controls, and the cabin air conditioning system. A Review Questions segment will be conducted on the material presented.

Engine – Power Plant, Operation and Lubrication

SCOPE: This block of instruction will cover the Arriel engine, engine mounting, the oil monitoring system to include system components and their location and system operation, as well as the engine oil cooling system. Additionally covered are all appropriate emergency procedures and caution / warning panel lights, as well as their meaning, and the proper corrective actions to be taken by the pilot. A Review Questions segment will be conducted on the material presented.

Engine – Monitoring, Controls, Fuel System and Fire Detection

SCOPE: This block of instruction will cover monitoring of the gas generator, free turbine speeds, the principle of torque detection on the torque meter shaft, and the gas temperature monitoring. Covered also are the engine fuel control, and operating principles of the twist grip, the fuel-metering unit, and the engine control system components and their location. Also covered in this block of instruction are the FADEC and the EBCAU; and the engine fire detection system. Additionally covered are all appropriate emergency procedures and caution / warning panel lights, as well as their meaning, and the proper corrective actions to be taken by the pilot. A Review Questions segment will be conducted on the material presented.

Flight Manual – Sections 5 And 6 - Performance Charts and Weight & Balance

SCOPE: This block of instruction will cover various Performance Charts and the Weight and Balance Charts, as well as their usage and their application.
Day 3 continued

**Flight Manual – Section 4 - Starting & Checks and Crew Resource Management**  2.0 hours

SCOPE: This block of instruction will cover the starting sequence, what to look for, what checks are to be performed, how to accomplish these checks, and the ‘whys’ behind these checks. Flight Training Procedures are also covered. Grand Prairie Municipal Airport information is available, if appropriate.

**Final Exam and Course Critique**  2.0 hours

SCOPE: This block of instruction will include administering the final exam, which will be of the open-book type, with emphasis on use of the flight manual to obtain information, knowledge of basic aircraft systems, and the practical use of charts associated with the flight manual. A maximum time limit of one hour is permitted for administering the Final Exam. The exams will be graded, and all exam questions missed will be discussed and explained. A critique will be conducted answer any student questions and to evaluate the course as well as the course presentation.

**Flight Training**  3 hours

**Day 4 & 5**

**Flight 1**  1.5 hours

**Flight 2**  1.5 hours