Pilot Training

H145 Helionix® / BK117 D2 Part 142 Initial Transition Training Course

16 Days

Ground School	**54 Hours**
Sim	**14 Hours plus 2 Hour Evaluation Flight**

Rev. 1.0

AIRBUS

SCOPE:

This course will provide a complete Part 142 Initial Pilot Ground School on the H145 Helionix® 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.

OBJECTIVE:

To teach the pilot the fundamental knowledge of the aircraft necessary to conduct safe and efficient ground, pre-flight and flight procedures in the H145. The pilot will be able to list the aircraft limitations, describe the functions and operations of the aircraft's systems, use the Flight Manual to obtain necessary information for safe and efficient operation of the aircraft, including knowledge of the aircraft charts necessary for safe and efficient operations. The ground training shall meet all of the ground training requirements of the ATP PTS FAA-S-8081-20. The flight training when successfully completed meets the requirements of 14 CFR Part 61.56 and 61.57 (a, b, c, d).

COMPLETIN STANDARDS:

This course is complete when the student has demonstrated through an evaluation flight test, written tests, and records that he/she meets the prerequisites specified in 14 CFR Part 61.56 and 61.57(a, b, c, d), and has the knowledge and skills necessary to pass the evaluation test flight**.** The student pilot may receive a flight review and/or instrument proficiency check at the completion of the course.

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 four student pilots per course.

Enrollment Prerequisites:

Age and Language Requirements:
Able to speak, read, write and understand the English language

Ratings and Certificates
FAA or ICAO Commercial Instrument Rotorcraft/Helicopter.

0. WELCOME AND IN-PROCESSING CL HRS: 0.5

1. **REFERENCES**: None

2. **SCOPE**: This block of instruction will cover registration, introduction, Airbus World Locations, Airbus Website, classroom procedures, miscellaneous, Goals, Prerequisites, Completion Standards, What this course does NOT cover, Course Hierarchy, Responsibilities.

3. **COMPLETION STANDARDS:** All required paperwork provided and validated by the instructor.

1. GENERAL INFORMATION CL HRS: 0.5

1. **REFERENCES**: RFM

2. **SCOPE**: The general overview will include Aircraft Development History, General Description, Helicopter Dimensions, Helicopter Documentation, Scheduled Inspections.

3. **COMPLETION STANDARDS:** The pilot will have successfully completed the lesson when the pilot can demonstrate knowledge of the overall design of the H145 aircraft.

2. DOCUMENTATION CL HRS: 2.5

1. **REFERENCES:** FLM VOL1 and VOL2, PCL, MMEL, TCDS, FSB.

2. **SCOPE**: This block of instruction will cover Airbus Documentation Overview, Flight Manual Revisions, Flight Manual Volume 1, Flight Manual Volume 2, Pilot Checklist (PCL), Master Minimum Equipment List (MMEL), Information Notices (IN), Safety Information Notices (SIN), Information Letters (IL), Technical Information Letters (TIL), Service Bulletins (SB), Alert Service Bulletins (ASB), FAA Airworthiness Directives (AD), FAA Type Certificate Data Sheet (TCDS), Flight Standardization Board Report (FSB).

3. **COMPLETION STANDARDS:** The pilot will have successfully completed the lesson when the pilot can demonstrate knowledge of the layout and use of FAA approved sections of the flight manual as well as the intent and general application of the flight manual supplements.

3. HELIONIX ® CL HRS: 5.5

1. **REFERENCES:** RFM Sections 2, 3, 4, and 7.

2. **SCOPE**: This block of instruction will cover Instrument Panel, Helionix® – Components / Locations, Helionix® – Architecture, Helionix® – Power, Components, MFD – Keys and Knobs, MFD – Main Display Formats, MFD – FND Display (Pilot/CoPilot), MFD – Synthetic Vision System, MFD – NAVD Displays, MFD – VMS Displays, MFD – DMAP Display, MFD – MISC Display, MFD – EFB Display, MFD – Default Configuration, MFD – Single MFD Failures, MFD – Dual MFD Failures, Helionix® – Alerting System, Alerting – Master List Principles, Alerting – Audio Principles, Alerting – Acknowledgement, Alerting – Degradation, Alerting – Warning Unit, Helionix® – Tests, VMS – Displays , FND/VMS – Clock / Chronometer, Helionix® FDCR – Flight Data Continuous Recording, Helionix® UMS – Usage and Monitoring, Limitations, Normal Procedures, Emergency Procedures

3. **COMPLETION STANDARDS:** The pilot will have successfully completed the lesson when the pilot can demonstrate knowledge of the Helionix system including AMC architecture, MFD roles, normal functioning as well as typical pages, status information, failure modes, limits, normal procedures, and emergency procedures.

4. AVIONICS CL HRS: 5.5

1. **REFERENCES:** RFM Sections 2, 3, 4, and 7.

2. **SCOPE**: This block of instruction will cover Avionics Overview, Architecture, Typical Antennas , Avionics Upper Deck , Avionics Consoles, Avionics Power, Avionics Upper Deck Cooling , Pitot Static System, Intercom, VHF AM Communication , ELT, VOR, ILS, Marker Beacon, DME, Transponder, FMS (GPS), Radar Altimeter, Barometic Altitude, Decision Altitude, Altitude Upper Limit, Integrated Electronic Stand-by Instrument, Magnetic Compass, Vision 1000 System, Limitations, Normal Procedures, Emergency Procedures

3. **COMPLETION STANDARDS:** The pilot will have successfully completed the lesson when the pilot can demonstrate knowledge of the normal use of the communication and navigation systems.

5. AUTOPILOT CL HRS: 7.25

1. **REFERENCES:** RFM Sections 2, 3, 4, and 7.

2. **SCOPE**: This block of instruction will cover, Autopilot – SAS / AFCS Overview, Autopilot – Backup-SAS, AFCS - Design Principles, AFCS – Basic Structure, AFCS – System Requirements, AFCS – System Description, AFCS – Functions, AFCS – Components, AFCS – Sensors, AFCS – Controls, AFCS – Actuators, Instrument Panel, FDS – FND Status Information, FDS- FND AFCS Strip, FDS – FND/NAVD Nav Coupling, FDS - FND Master List Messages, FDS – VMD AFCS Status, AFCS – Preflight Test Overview, AFCS – AP/BKUP CUT Test, AFCS – Engagement , AFCS – Recovery, AFCS – Automatic Stick Centering, AFCS – Modes and Functions, AFCS – Flight Protections, AFCS – System Monitoring, Limitations, Normal Procedures, Emergency Procedures

3. **COMPLETION STANDARDS:** The pilot will have successfully completed the lesson when the pilot can demonstrate knowledge of the H145 FDS/AFCS including it use, display interpretation, including relevant limits, normal procedures, and emergency procedures.

6. FUSELAGE CL HRS: 1.0

1. **REFERENCES:** RFM Sections 2, 3, 4, and 7.

2. **SCOPE**: This block of instruction will cover Fuselage – General, Airframe Structure, Cabin Structure, Drain System, Windshields / Windows, Doors, Access Panels & Covers, Interior Fairings, Cowlings, Handling, Parking / Mooring, Monitoring, Emergency Procedures

3. **COMPLETION STANDARDS**: The pilot will have successfully completed the lesson when the pilot can demonstrate knowledge of the general layout of the fuselage and knowledge of the limits, normal, and emergency procedures.

7. FLIGHT CONTROLS CL HRS: 2.0

1. **REFERENCES:** RFM Sections 2, 3, 4, and 7.

2. **SCOPE**: This block of instruction will cover Main Rotor Controls, Collective Controls , Cyclic Controls , Parallel Actuators, Tail Rotor Controls, Parallel Actuator Details, Hydraulic System, Main Rotor Actuators, Tail Rotor Actuators, Main Rotor Boosted Section, Monitoring and Indication , Testing, Limitations, Normal procedures, Emergency procedures

3. **COMPLETION STANDARDS:** The pilot will have successfully completed the lesson when the pilot can demonstrate knowledge of the flight control systems, monitoring, testing, limits, normal procedures, and emergency procedures.

8. TAIL UNIT CL HRS: 2.0

1. **REFERENCES**: RFM Sections 2, 3, 4, and 7.

2. **SCOPE**: This block of instruction will cover Overview, Structure, Drive, Control, Monitoring, Limits & Normal Procedures, Emergency Procedures

3. **COMPLETION STANDARDS**: The pilot will have successfully completed the lesson when the pilot can demonstrate knowledge of the trail rotor limitations, drive shaft, gearbox, lubrication system, control, and operation of the trail rotor including limits, normal, and emergency procedures.

9. LIFTING SYSTEM CL HRS: 2.0

1. **REFERENCES:** RFM Sections 2, 3, 4, and 7.

2. **SCOPE:** This block of instruction will cover Lifting system overview, Mounting system, Main transmission, Lubrication system, Main rotor system, Rotor blades, Rotor brake system, Mast Moment system, Monitoring and Indication , Limitations, Normal procedures, Emergency procedures

3. **COMPLETION STANDARDS:** The pilot will have successfully completed the lesson when the pilot can demonstrate knowledge of the drive, lubrication systems, monitoring and emergency procedures associated with the MGB, rotor brake, and mast moment system.

10. STANDARD EQUIPMENT **CL HRS: 2.75**

1. **REFERENCES:** RFM Sections 2, 3, 4, 7 and 9.2.

2. **SCOPE**: This block of instruction will cover Crew Seating, Passenger Seating, Windshield Wiper, Ventilation, ECS, Emergency Equipment, Lighting, LAVCS, Clamshell Windows, Pulsed Chip Detector (Fuzz Burner), Inlet Barrier Filter

3. **COMPLETION STANDARDS:** The pilot will have successfully completed the lesson when the pilot can demonstrate knowledge of normal use and testing of the standard equipment including relevant limits, normal procedures, and emergency procedures.

11. LANDING GEAR **CL HRS: 0.5**

1. **REFERENCES**: RFM Sections 2, 3, 4, and 7.

2. **SCOPE**: This block of instruction will cover Landing Gear – General, Steps & Hydraulic Dampers, Ground Clearance Dimensions, Limitations, Normal procedures, Emergency procedures

3. **COMPLETION STANDARDS:** The pilot will have successfully completed the lesson when the pilot can demonstrate knowledge of the landing gear system including limiations, basic operations, monitoring, and emergency procedures.

12. POWERPLANT **CL HRS 6.0**

1. **REFERENCES:** RFM Sections 2, 3, 4, and 7.

2. **SCOPE**: This block of instruction will cover Powerplant Overview, Power Plant Functional Components, Engine Integration, Airframe Firewall, Fire Warning & Extinguishing System, Engine Fuel System, Airframe Oil System, Engine Oil System, Engine Ignition System , Engine Data Recorder, Engine Control System, Engine Monitoring / Indication, Engine Operations, Limitations, Normal Procedures, Emergency Procedures

3. **COMPLETION STANDARDS:** The pilot will have successfully completed the lesson when the pilot can demonstrate knowledge of the powerplant system including limits, normal procedures, and emergency procedures.

13. FUEL

CL HRS: 2.0

1. **REFERENCES:** RFM Sections 2, 3, 4, and 7.

2. **SCOPE**: This block of instruction will cover Fuel System – Description, Fuel System – Tanks, Fuel System – Vents, Fuel System – Supply Lines, Fuel System – Equipment Plates, Fuel System – Fuel Pumps, Fuel System – Jet Pump, Fuel System – Fuel Pump Control, Fuel System – Fuel Pump Monitoring Fuel System – Shut-Off Valves, Fuel System – Shut-Off Valve Monitoring, Fuel System – Fuel Quantity Transmitters, Fuel System – Fuel Quantity Description, Fuel System – Fuel Quantity Indication, Fuel System – Fuel System Monitoring, Limitations, Normal Procedures, Fuel Warning, Cautions & Procedures

3. **COMPLETION STANDARDS:** The pilot will have successfully completed the lesson when the pilot can demonstrate knowledge of the fuel system including limits, normal procedures, and emergency procedures.

14. ELECTRIC POWER **CL HRS: 3.75**

1. **REFERENCES:** RFM Sections 2, 3, 4, and 7.

2. **SCOPE**: This block of instruction will cover General Description, Main Components, Equipment Location, Control Devices, System Overview, Diode Boxes, Consumer Buses, Battery System, Starter/Generator System, EPU, BUS TIE System, Operations, Limitations, Normal procedures, Emergency procedures

3. **COMPLETION STANDARDS:** The pilot will have successfully completed the lesson when the pilot can demonstrate knowledge of the limits, normal, and emergency procedures associated with the electrical systems.

15. PERFORMANCE **CL HRS: 3.5**

1. **REFERENCES:** RFM Sections 2, 4, 5, 5.2, 9.0 and 9.2.

2. **SCOPE**: This module will cover 5.1.1 – Standard Performance Conditions, 5.1.2 – Variable Factors, 5.1.4 – Power Check, 5.1.5 – Density Altitude, 5.1.8 – Height Velocity Envelope, 5.1.9 – Hover In/Out Ground Effect (AEO), 5.1.10 – Hover In Ground Effect (OEI), 5.1.11 – Hover Out of Ground Effect (OEI), 5.1.11 – OEI-HOGE Vertical R/C Reserve, 5.1.11 / 1.6 Headwind Component, 5.1.12 – CAT-B Takeoff Profile, 5.1.13 – Rate of Climb, 5.1.14 – CAT-B Landing Profile, 5.2.4 – Maximum Cruising Speed, 5.2.5 – Specific Fuel Consumption, 5.2.6 – Maximum Range, 5.2.7 – Maximum Endurance

3. **COMPLETION STANDARDS:** The pilot will have successfully completed the lesson when the pilot can demonstrate knowledge of the different performance sections, as well as how to use the relevant performance charts for performance planning.

16. MASS AND BALANCE **CL HRS: 0.75**

1. **REFERENCES:** RFM Sections 6 and MBR.

2. **SCOPE**: This block of instruction will cover Introduction, Definitions, Mass and Balance Record (MBR), Equipment List (EL), Passenger C.G. Seat Arrangements, Cabin / Fuel Loading Tables, Loading Example (longitudinal), Loading Example (lateral)

3. **COMPLETION STANDARDS:** The pilot will have successfully completed the lesson when the pilot can demonstrate knowledge related to the use of the relevant mass and balance reports and section 6 procedures for calculating mass and C.G.

17. PERFORMANCE CAT-A **CL HRS: 1.0**

1. **REFERENCES:** RFM Sections 2, 4, 5, 9.0, 9.2 and 9.2

2. **SCOPE:** This module will cover Category A Operations, Category A Common Terms, Category A Definitions, CAT A Limitations, Emergencies and Malfunctions, Normal Procedures, Performance Data. Clear Heliport and VTOL operations.

3. **COMPLETION STANDARDS:** The pilot will have successfully completed the lesson when the pilot can demonstrate knowledge of the different performance sections, as well as how to use the relevant performance charts for performance planning.

18. PREFLIGHT **CL HRS: 1.0**

1. **REFERENCES:** RFM 4 and 7.

2. **SCOPE**: This block of instruction will cover General, Exterior Check, Before Exterior Check, Before Exterior Check (Sequence), Fuselage (Right Side), Tail boom, Fuselage (Left Side), Cabin (Nose Area)

3. **COMPLETION STANDARDS:** The pilot will have successfully completed the lesson when the pilot can demonstrate knowledge of the preflight process including typical crew, mechanic, or pilot induced issues (open cowlings etc.).

19. MANUVERS OVERVIEW **CL HRS: 1.0**

1. **REFERENCES:** RFM Sections 2, 3, 4, 5, 9.0, 9.1 and 9.2.

2. **SCOPE**: This block of instruction will cover Definitions, IFR – Precision Approach, IFR – Non Precision Approach, IFR – Precision Approach (4-Axis), IFR – Non Precision Approach (4-AXIS), CAT-B – Takeoff Profile (AEO), CAT-B – Landing Profile (AEO), CAT-B – Rejected Takeoff (OEI), CAT-B – Transition to Flight (OEI), CAT-B – Landing (OEI), CAT-B – HOGE (OEI Landing), CAT-B – HOGE (OEI Transition to Flight), Limitations, Normal Procedures, Emergency Procedures

3. **COMPLETION STANDARDS:** The pilot will have successfully completed the lesson when the pilot can demonstrate knowledge of the maneuvers related to normal and emergency procedures in the H145 aircraft.

FINAL EXAM **CL HRS: 3.0**

The exam is a 50 question, multiple-choice; open book exam. The pilots may use all materials, notes, textbooks, diagrams received as a part of the course to answer the questions. At the end of the test, all exam papers will be turned in to the instructor for scoring.

The exams will be returned to the pilot for a class review, at which time the instructor will answer any questions.

FLIGHT TRAINING

14 Hours of PIC from Right Seat plus 2 Hour Evaluation Test Flight

A. **VFR Flight Breakdown**
The objective of the first 4 flights is to allow the pilot trainee to work on aircraft knowledge, normal and emergency procedures related to VFR flight prior to moving on to typical scenario based skills

B. **IFR Flight Breakdown**
The objective of flights 5-7 is to review the IFR system, Instrument Approach / Departure Procedures, IFR ENROUTE navigation. The segment will review normal procedures, limitations, and emergency procedures related to instrument flight.

C. **End-of-Course Evaluation**
The Training Center SFI will administer an end-of-course evaluation in accordance with PTS FAA-S-8081-20. The flight portion will include VFR and IFR flight operations with emergencies. The evaluation will include all required tasks as identified in ATP helicopter PTS FAA-S-8081-20.

VFR FLIGHT TRAINING

1. **Flight 1: Basic introduction to the H145 2.0 hours**
   a. **References:** RFM Section 2, 3,4,5 and 6 as well as Pilot's Training Guide & Training Manual
   b. **Emergencies:** Display Failures, Hot/Hung starts, Hydraulics
   c. **Preflight Preparation:**
      a) RFM Section 2 Limitations
      b) RFM Section 3 Emergency procedures
      c) REM Section 5 and 6 for W/B, Performance Planning
      d) RFM Section 4 Complete Review of Normal Procedures
      e) Check List Review
   d. **Objective:** The pilot trainee will demonstrate knowledge on completing the daily pre-mission planning and aircraft performance charts. The pilot trainee will be introduced to the cockpit of the H145 and familiarized with switches and controls. The pilot trainee will demonstrate basic knowledge of starting and shutting down the aircraft utilizing the aircraft checklist. This flight will include encompass the following tasks.
      a) Performance Planning and Limitations
      b) Check of weight and CG
      c) Cockpit management
      d) Use of checklists
      e) Normal start-up procedures
      f) Taxi
      g) Before take-off checks
      h) Clear Area normal take-off and landing procedures (CAT.B)
      i) Max Performance TO / Steep Approach
      j) VMS/FND environment
      k) Attitude retention and follow-up trim (5 levels of stability)
      l) AFCS introduction
      m) Effectiveness of the beep-trim (attitude-1°/beep>40kt)
      n) SAS flight (ap's off)
      o) Characteristics of a hinge less rotor
      p) Rapid deceleration
      q) Rejected landing
      r) OGE Hover
      s) Running landing
      t) Normal shutdown procedures
      u) Emergency egress

2. **Flight 2: Autopilot System / Aircraft Emergencies / OEI 2.0 hours**
   a. **References:** RFM, Pilot's Training Guide & Classroom Training Manual
   b. **Emergencies**: OEI, Autorotation,
   c. **Preflight Preparation:**
      a) RFM Section 2 Limitations
      b) RFM Section 5 and 6 for W/B, Performance Planning
      c) RFM Section 4 Normal Procedures
      d) RFM Section 3 Emergency procedures
      e) RFM Section 7 and relevant supplements
      f) Check List Review
   d. **Objective:** The pilot trainee will be will continue to work on the specific tasks associated with startup/shutdown procedures using the checklist and basic VFR flight maneuvers with and without the autopilot. A multi-point VFR flight scenario will be completed using the autopilot leveraging the different modes. During this flight the pilot trainee will be introduced to limited emergency procedures such as engine failures and possibly a simulated hydraulic failure. This flight will include the following items:
      a) Performance planning and limitations
      b) Check of weight and C.G.
      c) Cockpit management
      d) Use of checklists
      e) Normal start-up procedures
      f) Engine power check
      g) Hover power check
      h) VFR flight procedures
      i) Normal procedures (normal t/o, normal landing, running landing)
      j) AFCS upper modes
      k) AFCS protections
      l) OEI procedures
      m) Vortex Ring State
      n) Emergency procedures
      o) Normal shutdown procedures

3. **Flight 3: FADEC / TR Emergency Procedures / Autorotation 2.0 hours**
   a. **References:** RFM, Pilot's Training Guide & Classroom Training Manual
   b. **Emergencies**: FADEC, and Tail Rotor
   c. **Preflight Preparation:**
      a) RFM Section 2 Limitations
      b) RFM Section 5 and 6 for W/B, Performance Planning
      c) RFM Section 4 Normal Procedures
      d) RFM Section 3 Emergency procedures
      e) RFM Section 7 and relevant supplements
   d. **Objective:** During this flight the pilot trainee will be continue to work on engine failures in cruise flight and during approach and departure as well as other emergencies. This flight will include the following items:
      a) Performance planning and limitations
      b) Check of weight and CG
      c) Cockpit management
      d) Use of checklists
      e) Normal start-up procedures
      f) Hover power check
      g) VFR flight procedures
      h) Normal procedures
      i) Vertical take-offs
      j) OEI Procedures
      k) FADEC failures
      l) Tail Rotor failure
      m) Autorotation with power recovery
      n) Normal shutdown procedures

4. **Flight 4: Slopes / confined areas / IIMC** **2.0 hours**
   a. **References:** RFM, Pilot's Training Guide & Classroom Training Manual
   b. **Emergencies**: OEI, FADEC, and Tail Rotor
   c. **Preflight Preparation:**
      a) RFM Section 2 Limitations
      b) RFM Section 5 and 6 for W/B, Performance Planning
      c) RFM Section 4 Normal Procedures
      d) RFM Section 3 Emergency procedures
      e) RFM Section 7 and supplements for AP
   d. **Objective:** During this flight the pilot trainee will be continue to work on engine failures in cruise flight and during approach and departure as well as other emergencies. This flight will include a VFR flight scenario to the multiple destinations including confined areas/helipads. This flight will include the following items:
      a) Performance planning and limitations
      b) Check of weight and C.G.
      c) Cockpit management
      d) Use of checklists
      e) Normal start-up procedures
      f) Normal taxi (scope increased from first flight but still limited)
      g) Normal procedures
      h) Slope landings
      i) Confined area departures and landings
      j) IIMC
      k) Unusual Attitude recovery
      l) ILS approach
      m) Normal shutdown procedures

1. **Flight 5: IFR Flight LOFT** **2.0 hours**
   a. **References:** RFM, Scenario Listing, Pilot's Training Guide & Classroom Training Manual
   b. **Emergencies:** OEI, FADEC, AFCS, FND, VMS, Unusual Attitude Recovery
   c. **Preflight Preparation:**
      a) RFM Section 2 Limitations
      b) RFM Section 5 and 6 for W/B, Performance Planning
      c) RFM Section 3 emergency procedures
      d) RFM Section 4 Normal Procedures
      e) Garmin 750 practice using computer based simulator
      f) Airport Information including Approach Plates, SID & STAR's
   d. **Objective:** This flight is a LOFT in compliance with the FAA guidance found in 8900.1, Volume 3, Chapter 54, Section 6 and AC-120-35D.This flight will represent a realistic scenario based IFR flight between two airports.
      a) Flight Planning
      b) Normal startup procedures
      c) Taxi procedures
      d) Normal IFR flight procedures
      e) Utilize AFCS Upper Modes
      f) ILS
      g) LPV
      h) Missed Approach
      i) At least one emergency.

2. **Flight 6: IFR Flight OEI and failures** **2.0 hours**
   a. **References:** RFM, Scenario Listing, Pilot's Training Guide & Classroom Training Manual
   b. **Emergencies:** FDS, AFCS, PFDS and AP
   c. **Preflight Preparation:**
      a) RFM Section 2 Limitations (H/V Curve)
      b) RFM Section 5 and 6 for W/B, Performance Planning
      c) RFM Section 3 Emergency procedures
      d) RFM Section 4 Normal Procedures
      e) Airport Information including Approach Plates, SID & STAR's
   d. **Objective:** This flight will concentrate on IFR flight within controlled airspace utilizing the AFCS to two local airports using SID/STAR as well as precision and non-precision approaches with various malfunctions on approach as well as after the FAF. The pilot will be exposed to various FND, VMS, and system failures. The intent of these failures is to prepare the pilot to be able to fly a full uncoupled approach by hand if necessary.

      a) Normal startup procedures
      b) Taxi procedures
      c) Normal IFR flight procedures
      d) ILS
      e) LNAV Approach
      f) LPV approach
      g) Missed AEO and OEI
      h) FDS and ND Failure
      i) AFCS failures
      j) Systems failures
      k) Holding
      l) Normal shutdown procedures

3. **Flight 7: IFR Flight** **2.0 hours**
   a. **References:** RFM, Scenario Listing, Pilot's Training Guide & Classroom Training Manual
   b. **Emergencies:** OEI , FND, and VMS
   c. **Preflight Preparation:**
      a) RFM Section 2 Limitations (H/V Curve)
      b) RFM Section 5 and 6 for W/B, Performance Planning
      c) RFM Section 3 Emergency procedures
      d) RFM Section 4 Normal Procedures
      e) Airport Information including Approach Plates, SID & STAR's
   d. **Objective:** This flight is IFR flight within controlled airspace utilizing the AFCS to two local airports using both precision and non-precision approaches. Including a missed approach and hold. The pilot will be introduced to a static system failure which might facilitate decoupling of the AFCS. This malfunction is an excellent way to introduce the risks of IFR helicopter flight without an AFCS and the potential for unusual attitudes. This flight includes the following items:
      a) Normal startup procedures
      b) Taxi procedures
      c) Normal IFR flight procedures
      d) LNAV approach
      e) VOR – hand flown
      f) ILS – hand flown
      g) ILS - coupled
      h) Missed OEI and AEO
      i) Holding
4. Normal Shutdown procedures

4. **Flight 8: End-of-Course Evaluation** **2.0 hours**
   1**. References:** RFM and FAA-S-8081-20
   2. **Synopsis:** The Training Center Evaluator will administer an end-of-course evaluation in accordance with PTS FAA-S-8081-20. The evaluation will include an oral exam which will successfully be completed prior to the flight. The flight portion will include VFR and IFR flight operations with emergencies. The evaluation will include all required tasks as identified in ATP helicopter PTS FAA-S-8081-20.
   3. Evaluation Flight
      a. The flight portion will include all of the required tasks in the PTS
      b. The flight will include but not be limited to the following maneuvers;
         1) Normal Startup Procedures
         2) Clearance
         3) Taxi Procedures
         4) Normal IFR Flight Procedures
         5) Emergency Procedures
         6) Full Precision
         7) Non-Precision Approach
         8) Missed Approach (OEI)
         9) Holding
         10) Landing from an Approach
         11) Normal Shutdown Procedures