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CFETP 13HX
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AEROSPACE PHYSIOLOGY OFFICER

AIR FORCE SPECIALTY CODE 13HX



CAREER FIELD

EDUCATION AND TRAINING PLAN

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TABLE OF CONTENTS

Section A – General Information.....	4
Section B – Career Field Progression Information.....	5
Section C – Training Management.....	6
Attachment 1 – APO 201, APO 202 and Additional Training Items	9
Attachment 2 – Assignment Specific Training	17
Attachment 3 – Training Documentation Example	22
Attachment 4 – APO 101 Course Training Standard.....	23

Welcome to Aerospace Physiology!

You have joined a team of science-minded Airmen dedicated to ensuring the readiness, survivability, safety, and lethality of aircrew serving not just in the United States Air Force, but throughout the Department of Defense. Our scope is wide. We serve in multiple arenas such as Aircrew Training, High-Altitude Flight operations, Human Performance, and Mishap Prevention. You will interact and work alongside amazing men and women ensuring the defense of all that our country holds dear.

Never forget that you put on the uniform and how incredible it is that you chose to become part of the 1% of Americans who do that. You chose to “be in the arena” as former President, Theodore Roosevelt once said. My hope is that you experience a long and rewarding career as I have, serving in our Air Force. Learn, grow, ask questions, lean forward, take calculated risks, be accountable, help others, and lead. Remember you are an officer first, leading our Airmen not just in Aerospace Physiology, but having an impact across the force.

I have never stopped being impressed with the caliber of Aerospace Physiologists I see coming into this career field. The future is bright. Thank you again for your service to our country. I hope to see you around and wish you all the best.

Colonel Eric M. Hendrickson
13H Career Field Manager

PREFACE

***Aerospace Physiology Mission:** Provide mission support while training aircrew and operators on physiological stresses and human factors implications to increase performance and mitigate mishaps.*

***Aerospace Physiology Vision:** Aircrew trainers who specialize in aircraft weapon systems human factors training and mission support devoted to warfighter lethality and survivability.*

Section A – General Information

1. CFETP Overview. The 13HX Career Field Education and Training Plan (CFETP) is a comprehensive core training document that identifies minimum education and training requirements and support resources for the 13HX Air Force Specialty Code (AFSC). It is a "training road map" for the Aerospace Physiology Officer (APO) career field and provides APOs with a clear path to success that makes career field training identifiable, measurable, and budget-defensible. It is a contract between the trainee (13H1) and Flight Commander to ensure operational readiness of new APOs. In addition, it provides suggested Continuation Training for a fully upgraded APO to maintain knowledge and awareness of relevant and current information pertaining to the scope of practice within Aerospace Physiology (AP).

1.1. Use of the guidance provided in this CFETP provides the foundation for effective and efficient education and training of individuals in the 13H career field. Waivers must be forwarded to the 13H Career Field Manager (CFM) at af.a3.th@us.af.mil to accommodate availability constraints or personal emergencies.

1.2. For questions concerning this CFETP, communicate to the appropriate level on the supervisory chain, i.e. Flight Commander (Flt/CC), MAJCOM Program Manager (PM), etc. Refer to the Air Force Officer Classification Directory for detailed information on the breadth and scope of the 13H career field.

2. CFETP Maintenance and Use. The CFETP is maintained and certified by the 13H CFM. HAF AF/A3TH is the office of primary responsibility (OPR) for CFETP maintenance.

2.1. The 13H CFM is the CFETP approval authority. The 13H CFM will initiate a policy review as needed to ensure CFETP currency, accuracy, and relevancy. During the review period the 13H CFM, AP Lead Command, and MAJCOM PMs will identify and coordinate requirements that will be included in and/or removed from the CFETP. The 13H CFM will also determine if, when, and where STRTs and/or U&TWs should be convened to address CFETP issues that cannot be resolved during the annual review.

2.2. The 13H CFM, MAJCOM PMs, and AP subject matter experts (SMEs) determine and develop 13H upgrade training based on career field requirements established during CFETP reviews, U&TWs, STRT workshops, Council of Aerospace Physiology Executives (CAPE) meetings, and other forums. The education, training, and experience required for upgrade to the 13H3 Air Force Specialty Code (AFSC) are listed starting on page 6, Section C, Training Management.

2.3. 342d Training Squadron (342 TRS) staff develops and revises formal resident training based on requirements established via CFETP reviews, Specialty Training Requirements Team (STRT) workshops, and/or Utilization and Training Workshops (U&TW). The 342 TRS is also responsible for coordinating

with the 2 AF, 37 TRW, and 37 TRG to obtain the resources needed to provide the identified training.

Section B – Career Field Progression Information

3. 13H Career Progression. Officers should refer to Table 1, 13H Upgrade Progression, for expectations on the progression pathway. All upgrading officers should communicate their concerns, questions, or issues with their Flt/CC, local leadership, and/or MAJCOM PM as appropriate.

Table 1: 13H Upgrade Progression (13H1, 13H3, & 13H4)

AFSC Designator	Title	Training Requirements	Experience Requirements
13H1	Entry Level	Completion of SERE Courses & APO 101	None
13H3	Qualified Level	Completion of APO 201, APO 202, and course (5.2.1.4 thru 5.2.1.9) requirements.	22 months experience as a 13H1 following completion of Initial Skills Training.
13H4	*Staff Level	CFM discretion	CFM discretion
*Designation of “Staff Level” relates only to the level of functional responsibility and is restricted to positions above wing level. It does not denote additional specialty qualification.			

3.1. Career Progression Overview. Adequate training and timely progression from entry level (13H1) to the qualified level (13H3) is integral to ensuring the AP enterprise can accomplish its goal to support operational units. The guidance provided in this CFETP will help ensure junior officers receive timely, AFSC-relevant training at appropriate milestones within their upgrade process. In addition to the CFETP, effective mentoring by Flt/CCs and senior APOs is critical to planning, managing, and conducting an effective training program.

3.2. Assignment-Specific Training Requirements. Assignment-specific training requirements (Attachment 2) are unique to an AP location and are not considered core 13H upgrade requirements. The APO shall receive on-the-job training (OJT) or complete identified in-residence courses (as applicable) as soon as possible after being assigned to the specified mission. Specific requirements are managed by the MAJCOM responsible for the unit to which the member is being assigned. For example, contact the ACC MAJCOM PM for Mission Design Series (MDS)-specific (F-22, F-35, etc.) familiarization trainings (MFTs).

4. Duty Badges

4.1. Operations Support Badge. 13HX officers wear the Operations Support Badge (OSB).

4.1.1. Basic Badge. The basic badge is awarded upon successful completion of the APO 101 course.

4.1.2. Senior Badge. The senior badge adds a star to the top of the badge. Wear the senior badge after 7

years in the career field.

4.1.3. Master Badge. The master badge indicates the final step in the occupational series. Wear the master badge after 15 years in the career field.

4.1.4. Prior Enlisted Officers. When serving as an officer in the same career field as when enlisted, count both time in the enlisted and officer career fields to determine the earned badge level.

4.2. Non-Rated Officer Aircrew Badge. To support squadron readiness and mitigate physiological episodes, all APOs will be assigned to X-prefixed duty positions as basic aircrew and will wear the non-rated officer aircrew badge.

4.2.1. Wear of the non-rated officer aircrew badge by APOs will be done in accordance with guidance found in AFMAN 11-402, *Aviation and Parachutist Service*. Please work with your Flt/CC and Host Aviation Resource Management (HARM) office to accomplish necessary requirements for flight.

Section C – Training Management

5. Training. This section describes the mandatory training that leads to the attainment of the qualified level (13H3) AFSC. It is the responsibility of Flt/CC, Squadron Commander (Sq/CC), and MAJCOM PM to ensure requirements are met. The timeline for completion is no more than 22 months following completion of Initial Skills Training. Unit Sq/CCs, in consultation with PMs, will request a waiver from the 13H CFM if circumstances prevent an officer from accomplishing requirements within the 22-month timeframe.

5.1. Training Documentation. Flt/CCs are required to notify their respective Sq/CC and PM when officers in their flights have completed all requirements. Following receipt of the memorandum referenced in Attachment 3, the Flt/CC will request that the Sq/CC initiate the process for the officer's AFSC status to be upgraded to 13H3. This process requires the submission of an AF Form 2096 *Classification & On-the-Job Training Action*, through the local chain of command of the upgrading officer. Questions regarding AFSC change procedures and local AF Form 2096 coordination should be directed to the local Unit Training Manager (UTM) and/or the Military Personnel Flight. AFMAN 36-2100 is the source guidance for DAF Form 2096 administration. PMs will notify the 13H CFM when an officer in their MAJCOM has been approved for upgrade.

5.2. 13H Training.

5.2.1. Training Course List.

5.2.1.1. Survival, Evasion, Resistance and Escape (SERE) Course S-V85-A - Emergency Parachute & Water Survival Training

5.2.1.2. SERE Course S-V97-A – Advanced SERE Skills Training. Note: *S-V88-AL (Evasion and Conduct After Capture)* is a suitable substitute if *S-V97-A* is not available.

5.2.1.3. APO 101 Course – This course provides the knowledge and skills to perform basic duties as an APO. Refer to Attachment 4 for a detailed description. The APO 101 Course OPR is the 342 TRS.

5.2.1.4. Enhanced Learning and Instructional Techniques Enrichment (ELITE) - Mobile Training Team

5.2.1.5. Crew Resource Management (CRM) Facilitator Training

5.2.1.6. Sleep Activity Fatigue Task Effectiveness – Fatigue Avoidance Scheduling Tool (SAFTE-FAST) – Training Link (complete all 6 videos): [Training Academy | SAFTE-FAST \(saftefast.com\)](#)

5.2.1.7. Human Factors Workshop for Safety Professionals (HFWSP) (WCIP05AH)

5.2.1.8. USAF Night Vision Goggle Academic Instructor Course (NVGAIC)

5.2.1.9. Air Force Safety Center (AFSEC) Courses: Aircraft Mishap Investigation Course (AMIC) (WCIP05A) & Aviation Safety Program Management (ASPM) (WCIP09B)

5.2.2. Training Flow. The flow of training starts with Initial Skills Training (IST) and progresses to 13H3 Upgrade Training. OJT takes place at the first duty station of the upgrading officer and should be initiated as early as possible.

5.2.2.1. IST will commence with the two SERE courses and conclude with the completion of the APO 101 course.

5.2.2.2. 13H3 Upgrade Training will start following the completion of all IST requirements, and is defined by completion of APO 201, APO 202, and training courses listed (5.2.1.4 thru 5.2.1.9). The flow of 13H3 Upgrade Training courses (5.2.1.4 thru 5.2.1.9) may be adjusted as Flt/CCs deem necessary due to course availability, scheduling, etc. NOTE: The AP Schoolhouse/342 TRS has positioned the ELITE course to directly follow the completion of the APO 101 course.

5.2.2.3. APO 201 (Teaching Tracks). Reference Attachment 1, Table 2 for items required for APO 201.

5.2.2.4. APO 202 (OJT). Reference Attachment 1, Table 4 for OJT items that must be signed off by the Flt/CC of the 13H1. While the Flt/CC must provide all sign-off, OJT shall be provided by either the Flt/CC or Flt/CC designated subject matter expert, i.e. Flight Chief, Pilot, etc. Completion of OJT items may be accomplished at any time during the upgrade/training flow of the 13H1.

5.2.2.5. Additional Instructor Courses. Reference Attachment 1, Table 3. While not required for upgrade to 13H3, the refresher courses listed in Table 3 must be certified on an as-needed basis given current or future mission sets. All course material, instructor guides, and student guides can be found on the Air Education and Training Command (AETC) bookstore.

5.2.2.6. Training Quotas. Centrally funded slots may be provided for above courses (5.2.1.1 thru 5.2.1.9). If centrally funded slots are not available, then courses shall be funded by the unit. Contact the respective MAJCOM PM with any questions or concerns regarding course funding. Course descriptions, administrative instructions/requirements, and security and equipment requirements can be found on the AF Education and Training Course Announcement website: <https://usaf.dps.mil/teams/app10-etca/SitePages/home.aspx>.

5.2.3. 13H Continuation Training. The following are optional courses. Local leadership will determine attendance. This list is not all inclusive. Flt/CCs and PMs will be able to provide more specific information as needed.

5.2.3.1. Basic Airborne School

5.2.3.2. Air Force Continuous Process Improvement Green Belt Academics Course
<https://usaf.opusworks.com/>

5.2.3.3. Military Freefall Parachutist Course

5.2.3.4. Arctic Survival (S-V87-A)

5.2.3.5. Top Knife II USAF Flight Surgeon High Performance Aircraft Training Course

5.2.3.6. Top Knife for Remotely Piloted Aircraft and Intelligence, Surveillance and Reconnaissance Operations

5.2.3.7. Cross Mission Awareness (exchange between APOs at differing MDS locations, bases, MAJCOMs, etc).

5.2.4. Annual Conferences. APOs are strongly encouraged to attend various annual conferences which are valuable at maintaining knowledge relevancy and currency. These conferences include, but are not limited to: The Air Force Association's Air, Space, and Cyber Conference, 19 AF Aircrew Human Performance Conference, the Aerospace Medical Association (AsMA) Annual Scientific Meeting, etc.

Attachment 1 - APO 201, APO 202 and Additional Training Items

Table 2. APO 201 Required Instructor Course Sign-Off Items

Component	Initial Track	
Introduction to Human Factors in Aviation	X	
Physiological Effects of Altitude	X	
Performance Threats	X	
Physiology Considerations of Aircrew Flight Equipment	X	
Vision	X	
Spatial Disorientation	X	
Physiological Consideration of Aircraft Egress	X	
Night Vision Lab	X	
Noise and Vibration	X	
Attention Management Threats to Situational Awareness (SA)	X	
Acceleration	X	
Barany Chair/Spatial Disorientation (SD) Trainer	X	
Component	Track A	Track T
Physiological Effects of Altitude	X	X
Performance Threats	X	X
Vision	X	X
Spatial Disorientation	X	X
Noise and Vibration	X	X
Attention Management Threats to SA	X	X
Acceleration (Track A only)	X	

Officer Trainee: _____

Flt/CC: _____

Table 3. Additional Instructor Courses

Refresher Training Requirements by Tracks				
	Track H	Track J	Track R	Track E
Physiological Effects of Altitude	X	X		X
Performance Threats	X	X	X	
Vision	X	X		
Spatial Disorientation	X		X	X
Noise and Vibration	X	X		
Attention Management Threats to SA	X	X	X	X
Acceleration				X (fighter aircraft only)

Officer Trainee: _____ **Flt/CC:** _____

Table 4. APO 202 Components

1. Applicable AFI / Policy Review: Within each publication, focus on areas that highlight awareness, duties, and topics that APOs must be familiar with to optimize aircrew performance.			
Certification for OJT			
Training Start Date	Training Complete Date	Trainee Initials	Flt/CC Initials
Tasks, Knowledge, Activities, and Technical References			
1.1. Read AFMAN 11-403 – Aerospace Physiology Training Program			
1.2. Read AFPAM 11-406 – Aerospace Physiology Program Guidance			
1.3. Read local APTU Operating Instructions – specific to local unit			
1.4. Read AFMAN 11-202v3 – Flight Operations			
1.5. Read AFMAN 11-290 – Cockpit/Crew Resource Management and Threat & Error Management Program			
1.6. DAFPD 10-9 – Lead Command/Agent designation and responsibilities for USAF weapon systems, non-weapon systems, and activities.			
1.7. Read assigned (local to your base) MDS AFMAN 11-202 vol 1 (Aircrew Training) and vol 3 (Flight Operations)			

1.8. Read AFMAN 11-404 – Fighter Aircrew Acceleration Training Program			
1.9. Read AFPAM 11-419 – G Awareness for Aircrew			
1.10. Read AFMAN 11-409 – High Altitude for Aircrew Mission Support Capability Program			
1.11. Read AFMAN 11-210 – Instrument Refresher Program			
1.12. Read AFI 65-503 – US Air Force Cost and Planning Factors			
1.13. Read AFI 16-1301 – Survival, Evasion, Resistance, and Escape (SERE) Program			
1.14. Read AFPAM 11-417 – Orientation in Aviation			
1.15. Read DAFI 91-204 – Safety Investigations and Reports			
1.16. Read AFI 91-202 – The US Air Force Mishap Prevention Program			
1.17. Read AFI 90-802 – Risk Management			
1.18. Read AFMAN 11-301 vol 1 – Aircrew Flight Equipment (AFE)			
1.19. Read AFMAN 11-301 vol 2 – Management and Configuration Requirements for AFE			
1.20. Read AFMAN 11-301 vol 3 – AFE Contingency Operations and Planning			
1.21. Read AFMAN 11-301 vol 4 – AFE Career Field Development			
1.22. Read AFI 48-101 – Aerospace Medicine Enterprise			
1.23. Read DAFMAN 11-401 – Aviation Management			
2. AP Mission Orientation Events – Training Reference: Flight Commander guidance			
Certification for OJT			
Training Start Date	Training Complete Date	Trainee Initials	Flt/CC Initials
Tasks, Knowledge, Activities, and Technical References			
2.1. Attend and Understand Purpose of Flying Squadron Safety Meeting			
2.2. Attend and Understand Purpose of Wing Safety Meeting			

2.3. Define the Aerospace Physiologist’s role within (to include site visit):			
2.3.1. Aircrew Flight Equipment			
2.3.2. Wing Safety Office			
2.3.3. Human Performance programs, such as Comprehensive Readiness Aircrew Flying Training (CRAFT) or Optimizing the Human Weapon System (OHWS)			
2.3.4. Mishap Response (to include Flight Medicine)			
2.4. Attend and Understand Purpose of Local Instrument Refresher Course			
2.5. Schedule & Conduct 1 on 1 Mentoring Session with any Senior APO Leader (O-5 and above)			
2.6. Gain access to Air Force Safety Automated System (AFSAS) (https://afsas.safety.af.mil/Home.do)			
2.7. Gain access to AETC Bookstore (https://trss3.randolph.af.mil/Bookstore/home/homePage.aspx)			
2.8. Gain access to AP SharePoint (https://usaf.dps.mil/sites/Aerospacephysiology)			
2.9. Understand use of the following forms:			
2.9.1. AF Form 1522 (ARMS Additional Training Accomplishment Report)			
2.9.2. DAF Form 797 (Job Qualification Standard Continuation/Command JQS)			
2.9.3. Aerospace Physiology Information Files (APIFs) – Found at AP SharePoint → 19AF → APIF Library			
2.10. X-Prefix Requirements: Accomplish as early as possible during upgrade, in accordance with the Aerospace Physiology (AP) Enterprise Aircrew Flying Training Memorandum.			
3. AP Written Assignments. <i>The below items must be completed via the Aerospace Physiology Officer Upgrade Training course on MyLearning. Allocate no more than 3 pages/6 hours for each item.</i>			
Validation of Completion			
Start Date	Complete Date	Trainee Initials	Flt/CC Initials
Tasks, Knowledge, Activities, and Technical References			
E-mail 342TRS.13H@us.af.mil for training materials/instructions			
3.1. Fatigue Countermeasures in Aviation			
3.2. Human Factor Trend Analysis			
3.3. Human Performance Improvement			
3.4. Concepts in Aviation Psychology & Aeronautical Engineering			

3.5. Application of Human Systems Integration			
3.6. Head-Up Display Anti-G Straining Maneuver Review and G-induced Loss of Consciousness Assessment			
3.7. Altitude Decompression Sickness (DCS) Risk Assessment Computer Usage			
4. Reduced Oxygen Breathing Device (ROBD) and Hypoxia Familiarization Trainer (HFT) Operations. References: AFPAM 11-406, Chapter 22 & 23, AFMAN 11-403 Chapter 8, ROBD Operations. <i>The below items must be completed via the Aerospace Physiology Officer Upgrade Training course on MyLearning. E-mail: 342TRS.13H@us.af.mil with any questions.</i>			
Certification for OJT			
Training Start Date	Training Complete Date	Trainee Initials	Flt/CC Initials
Tasks, Knowledge, Activities, and Technical References			
4.1. Understand ROBD & HFT Purpose			
4.2. Understand ROBD Background			
4.3. Understand ROBD Components			
4.4. Understand Theory of ROBD Operation			
4.5. Configure and Start-up ROBD			
4.6. Configure HFT & X-Plane Software			
4.7. Program ROBD Training Profile			
4.8. Understand Management of ROBD Reactions and Emergency Procedures (EPs)			
4.9. Shut down ROBD			
4.10. Store ROBD			

4.11. Conduct ROBD Training Session			
5. Hypobaric Chamber Operations			
Certification for OJT			
Training Start Date	Training Complete Date	Trainee Initials	Flt/CC Initials
Tasks, Knowledge, Activities, and Technical References			
5.1. Obtain qualification on Aerospace Physiology Officer (APO) Duties, Responsibilities, & Emergency Procedures (EPs) (Minimum 10 times with a mix of Refresher & Initial classes)			
5.2. Inside Observer (IO) Duties (<i>must be done in the following order: IO2 → IO1 → IO3; “Real-World” refers to operational training flight</i>)			
5.2.1. Obtain qualification on IO2 Duties, Responsibilities, & EPs (Minimum 4 Real-World Flights with a mix of Refresher & Initial classes)			
5.2.2. Obtain qualification on IO1 Duties, Responsibilities, & EPs (Minimum 4 Real-World Flights with a mix of Refresher & Initial classes)			
5.2.3 Obtain qualification on IO3 Duties, Responsibilities, & EPs (Minimum 4 Real-World Flights with a mix of Refresher & Initial classes)			
5.3. Obtain qualification on Recorder Duties, Responsibilities, & Emergency Procedures (EPs).			
5.4. Understand Crew Chief Duties, Responsibilities, & EPs.			
5.5. Understand Chamber Operator Duties, Responsibilities & EPs.			
5.6. Understand Lock Operator Duties, Responsibilities, & EPs.			
5.7. Understand Lecturer Duties, Responsibilities, & EPs.			
5.8. Demonstrate Ability to provide corrective action for Hypoxia			
5.9. Demonstrate Ability to provide corrective action for Hyperventilation			
5.10. Demonstrate Ability to provide corrective action for Anxiety/Claustrophobia			

5.11. Demonstrate Ability to provide corrective action for Barotitis Media			
5.12. Demonstrate Ability to provide corrective action for GI discomfort			
5.13. Demonstrate Ability to provide corrective action for Barodontalgia			
5.14. Demonstrate ability to provide corrective action for DCS			
5.15. Demonstrate ability to provide corrective action for Unconscious/Unresponsive Reactor			
5.16. Demonstrate ability to respond to Fire/Smoke/Fumes			
5.17. Demonstrate proper use of Politzer Bag			
5.18. Demonstrate ability to respond to Hypobaric Chamber Power Loss			
5.19. Demonstrate ability to respond to Loss of Oxygen Supply to Hypobaric Chamber			
5.20. Demonstrate ability to respond to Hypobaric Chamber Pump Failure			
5.21. Execute DCS Reactor Plan and Notification			
5.22. Plan/Conduct Joint APTU and EMS Chamber Reactor Response Exercise			
6. AFPAM 11-406 Emphasis Items			
Certification for OJT			
Training Start Date	Training Complete Date	Trainee Initials	Flt/CC Initials
Tasks, Knowledge, Activities, and Technical References <i>(Intent is to gain understanding on each)</i>			
6.1. Aircrew Rotational Training (ART)			
6.2. Forms			
6.2.1. DD Form 114 (Military Pay Order)			

6.2.2. AF Form 4026 (Aircrew Training Devices Utilization)

6.2.3. AF Form 1522 (ARMS Additional Training Accomplishment Report)

6.2.4. DD Form 2992 (Medical Recommendation for Flying or Special Operational Duty)

6.2.5. AFTO 95 (Significant Historical Data)

6.2.6. AFTO 334 (Helmet and Oxygen Mask Connector)

6.2.7. AFTO 244 (Industrial/Support Equipment)

6.2.8. APTU Training Report Requirements

Attachment 2 – Assignment Specific Training

1. Assignment Specific Training. The OJT items listed below are specific to an AP assignment and are not considered core 13H upgrade requirements. The APO will receive the following (as applicable) as soon as possible after being assigned to the specified base.

1. Gyro Integrated Physiological Trainer (IPT) II Operations Assignment applicability: Columbus AFB, Laughlin AFB, Randolph AFB, Sheppard AFB, Vance AFB Reference: AP SharePoint (https://usaf.dps.mil/sites/Aerospacephysiology): Gyro IPT II Operations & Maintenance (O&M) Manual, v. Apr 2015;			
Certification for OJT			
Training Start Date	Training Complete Date	Trainee Initials	Flt/CC Initials
Tasks, Knowledge, Activities, and Technical References			
1.1. Crew Chief			
1.1.1. Training requirements and system components (ref: O&M manual, 1.4.)			
1.1.2. Run daily and start procedure checklists (ref: O&M manual, 2.2.1. and 3.3.1.)			
1.1.3. Emergency procedures (ref: O&M manual, 2.2.5.-2.2.7.)			
1.1.4. Run daily shut-down procedure checklist (ref: O&M manual, 2.2.4.)			
1.1.5. Session operations and safety briefing (ref: O&M manual, xvi & 2.2.2.2.)			
1.2. Operator			
1.2.1. Training requirements and system components (ref: O&M manual, 1.4.)			
1.2.2. Session operations (ref: O&M manual, 2.3.5.)			
1.2.3. Emergency procedures (ref: O&M manual 2.2.5.-2.2.7.)			
1.2.4. Post-flight procedures (ref: O&M manual, 2.2.5.-2.2.7.)			

1.3. Lecturer
1.3.1. Training requirements
1.3.2. Vestibular systems and Somatogyral Illusions (ref: AFPAM 11-417)
1.3.3. Complete Basic Flight Course Computer-Based Training
1.3.4. Familiarization flight in Gyro IPT II using local procedures
1.4. Vestibular Illusions (ref: O&M manual, Table 1-1)
1.4.1. Somatogravic Illusion
1.4.1.1. Fly Somatogravic Illusion profile
1.4.1.2. Practice Somatogravic Illusion lecture
1.4.2. Leans Illusion
1.4.2.1. Fly Leans Illusion profile
1.4.2.2. Practice Leans Illusion lecture
1.4.3. Coriolis Illusion
1.4.3.1. Fly Coriolis Illusion profile
1.4.3.2. Practice Coriolis Illusion lecture
1.4.4. Graveyard Spin Illusion
1.4.4.1. Fly Graveyard Spin Illusion profile
1.4.4.2. Practice Graveyard Spin Illusion lecture

1.4.5. Graveyard Spiral Illusion

1.4.5.1. Fly Graveyard Spiral Illusion profile

1.4.5.2. Practice Graveyard Spiral Illusion lecture

1.4.6. Nystagmus Illusion

1.4.6.1. Fly Nystagmus Illusion profile

1.4.6.2. Practice Nystagmus Illusion lecture

1.5. Maintenance *(not required but encouraged if time permits)*

1.5.1. Training requirements and system components (ref: O&M manual, 1.4. and 2.1.)

1.5.2. Torque setting (ref: O&M manual, 3.6.)

1.5.3. Troubleshooting (ref: O&M manual, 4.2.)

1.5.3.1. ETC contact info

1.5.3.2. Power supply and emergency shut-off (ref: O&M manual, 2.2.5.2.)

1.5.3.3. Check and replace fuses (ref: O&M manual, Table 5-2)

1.5.3.4. Check and adjust pressure (ref: O&M manual, 1.4.2.5. & 3.3.1., part 8)

1.5.3.5. View logs (ref: O&M manual, 3.1.6.)

1.5.4. Run daily checklist (ref: O&M manual, 2.2.1.)

2. F-22 Ground Pressure Breathing for Altitude Training (GPBAT) Operations

Assignment applicability: Langley AFB, VA

Reference: AP SharePoint (<https://usaf.dps.mil/sites/Aerospacephysiology>): Ground-Level Pressure Breathing for Altitude Training Link.

Certification for OJT

Training Start Date	Training Complete Date	Trainee Initials	Ft/CC Initials

Tasks, Knowledge, Activities, and Technical References

2.1. GPBAT Purpose

2.2. TTU-529/E Man-Side Test Unit

2.2.1. TTU-529/E Safety

2.2.2. TTU-529/E Configuration/Start-up

2.2.3. TTU-529/E Shut down

2.2.4. TTU-529/E Storage

2.3. GPBAT Lab and Profiles

2.3.1. Pre-GBPAT Lab Briefing

2.3.2. GPBAT Training Profile 1

2.3.3. GPBAT Training Profile 2

2.3.4. GPBAT Training Profile 3

2.3.5. GPBAT Training Profile 4

2.3.6. Post-GBPAT Lab Briefing

2.4. Manage GPBAT Reactions and EPs

3. Centrifuge Operations Assignment applicability: Wright-Patterson AFB; Reference: USAF ATFS-400-31 High Performance Human Centrifuge, 2017

Certification for OJT

Training Start Date	Training Complete Date	Trainee Initials	Flt/CC Initials

Tasks, Knowledge, Activities, and Technical References

3.1. Centrifuge System Overview

3.2. Controls, Checks, and Safety

3.3. Run Modes & Operating Procedures

3.4. System Utilities and Editors

3.5. Tactical Flight & Auxiliary Applications

3.6. Lockout Tagout Procedures

3.7. Troubleshooting Procedures

3.8. Control Room Video Display and Controls

3.9. Cockpit Module Exchange

3.10. Cockpit Module Configuration Change

3.11. Emergency Procedures

3.12. Complete AF Form 4293 (student grade sheet)

3.13. Conduct AFMAN 11-404 Acceleration Academic Instruction

3.14. Conduct AGSM Performance Debrief and Critique

Attachment 3 – Training Documentation Example

Host-Base/Wing
Letterhead

Date

MEMORANDUM FOR AP PROGRAM MANAGER (XXXXXX)
ATTENTION: XXXXXX

FROM: XXX OSS/CC
XXXX AFB, XX

SUBJECT: Certification of 13H3 AFSC Upgrade Training Completion for 1Lt XXXX

1. I certify that 1Lt XXXX has completed all task, knowledge, activity, and experience requirements listed in the 13H CFETP for upgrade to the 13H3 AFSC.
2. Please contact me at DSN 123-4567 if you have any questions.

//Signature//
XXXX, Lt Col, USAF
Commander, 342 Training Squadron

//Signature//
XXXXXX, Lt Col, USAF
Commander, XXX OSS

Attachment 4 – APO 101 Course Training Standard

1. Qualitative Requirements.

Table 5. QUALITATIVE REQUIREMENTS

Behavioral Statement CTS Coding System	
Code	Definition
K	Subject Knowledge Training - The verb selection identifies the individual's ability to identify facts, state principles, analyze, or evaluate the subject
P	Performance Training - Identifies that the individual has performed the task to the satisfaction of the course; however, the individual may not be capable of meeting the field requirements for speed and accuracy.
pk	Performance Knowledge Training - The verb selection identifies the individual's ability to relate simple facts, procedures, operating principles, and operational theory for the task.
-	No training provided in the course or CDC.
X	Training is required but not provided due to limitations in resources.
Each CTS element is written as a behavioral statement. The detail of the statement and verb selection reflects the level of training provided by resident training and career development courses.	

2. Task, Knowledge, and Behavioral Codes. The following are line items for the APO 101 Course Training Standard.

Table 6. TASK, KNOWLEDGE, AND BEHAVIORAL CODE

1. Aerospace Physiology Enterprise	-
1.1. Identify purpose, composition, and function of the Aerospace Physiology Enterprise.	K
2. Principles of Aerospace Physiology Instruction	-
2.1. Identify principles of learning, instructional delivery, and evaluation.	K
2.2. Present instruction on Physiological Effects of Altitude IAW AP standardized curriculum.	P
2.3. Present instruction on Noise & Vibration IAW AP standardized curriculum.	P
2.4. Present instruction on Performance Threats IAW AP standardized curriculum.	P
3. Physiological Effects of Altitude	-
3.1. Describe characteristics of the earth's atmosphere.	K
3.2. Identify the various gas laws and their physiological significance.	K
3.3. Explain the physiological processes of human respiration and circulation.	K
3.4. Determine the causes, symptoms, and treatment of hypoxia.	K
3.5. Determine the causes, symptoms, and treatment of hyperventilation.	K
3.6. Determine the causes, symptoms, and treatment of trapped gas disorders.	K
3.7. Determine the causes, symptoms, and treatment of DCS.	K
4. Flight Principles and Physiological Considerations in Aviation	-
4.1. Identify basic principles of flight and flight operations.	K
4.2. Given a flying simulator, demonstrate basic aircraft control and operation.	P
4.3. Identify the physiological characteristics and limitations of vision in flight.	K

4.4. Identify the principles and characteristics of aided night vision and the use of Night Vision Devices (NVD's).	K
4.5. Determine causes, and countermeasures of spatial disorientation threats in flight.	K
4.6. Determine causes and countermeasures of motion sickness.	K
4.7. Determine causes and countermeasures of acceleration threats in flight.	K
4.8. Identify principles and characteristics of aircraft emergency escape or crash.	K
5. Aircraft Life Support Systems	-
5.1. Describe principles and characteristics of aircraft pressurization systems.	K
5.2. Explain principles and characteristics of aircraft oxygen systems.	K
5.3. Explain principles and characteristics of Aircrew Flight Equipment.	K
5.4. Perform fitting, cleaning, and inspections of the aviator mask and helmet.	P
6. High Altitude Operations	-
6.1. Identify the physiological hazards and mitigations associated with High Altitude Intelligence Surveillance and Reconnaissance (HAISR) missions.	K
6.2. Identify the physiological hazards and mitigations associated High Altitude Airdrop Mission Support (HAAMS) missions.	K
7. Hypobaric Chamber Operations	-
7.1. Identify chamber crew duties and responsibilities.	K
7.2. Demonstrate operation of the altitude chamber and subsystems.	P
7.3. Recognize and respond to altitude chamber reactions.	P
7.4. Recognize and respond to altitude chamber emergencies.	P
7.5. Complete Basic Life Support (BLS-CPR) Training.	P
8. Aircrew Performance	-
8.1. Determine causes and countermeasures of self-imposed performance threats in aviation.	K
8.2. Determine causes and countermeasures of fatigue and circadian rhythm disruption.	K
8.3. Determine causes and countermeasures of thermal stress in aviation.	K
8.4. Determine hazards and mitigations associated with noise and vibration exposure in aviation.	K
8.5. Identify the purpose, composition, and functions of AF Human Performance Enhancement programs and technology.	K
9. Reduced Oxygen Breathing Device (ROBD) Operations	-
9.1. Identify the mechanical features and operations of the ROBD.	K
9.2. Demonstrate operation of the ROBD.	P
10. Aviation Safety and Mishap Prevention	-
10.1. Identify principles and characteristics of USAF safety programs.	K
10.2. Identify principles and characteristics of human factors.	K
10.3. Identify principles and characteristics of Situational Awareness (SA) and countermeasures to attention management threats.	K
10.4. Identify the purpose and components of the AF crew resource management.	K
10.5. Demonstrate principles of aviation safety and mishap prevention.	P
11. Altitude Training	-
11.1. Complete Initial Hypobaric Chamber Training.	P
11.2. Complete a Refresher Hypobaric Chamber Profile.	P
11.3. Complete Reduced Oxygen Breathing Device Profile.	P
12. Acceleration Training	-
12.1. Complete Non-Pipeline Acceleration Training (NPAT) Course.	P
13. Physical Training	-
13.1. Complete a diagnostic AF Physical Fitness Assessment.	P