AFSC 13H4, Staff
AFSC 13H3, Qualified
AFSC 13H1, Entry

AEROSPACE PHYSIOLOGIST
(Established 31 Oct 23)

1. Specialty Summary. Train selected Line of the Air Force (LAF) officers in a course of instruction leading to designation as an Air Force Aerospace Physiology Officer (APO). Provides world-class aerospace physiology and human factors training to Joint Service aircrew. Trains in hypobaric (altitude) chamber and reduced oxygen breathing device (ROBD) operations, high altitude airdrop mission support, (HAAMS) high altitude intelligence surveillance reconnaissance (HAISR) mission support, physiological aspects of flight, sensory physiology, aircrew breathing systems, aircrew flight equipment (AFE), acceleration physiology, emergency egress, aircraft mishap investigation concepts, operational research, and aircrew performance enhancement. Leads and manages Aerospace Physiological Training Flights and Aerospace Physiology Training Teams. Specific duties include: Instructs personnel in Aerospace Physiology and related human factors (HF) outlined in various 11-Series and 91- Series Air Force Instructions and associated MAJCOM supplements. Plans, conducts, and directs aerospace physiology acquisition, science and technology programs; manages specialized physiology support divisions for high altitude projects; performs flying duties as a non-rated officer aircrew when assigned to the "X", "K", or "Q" prefix; deploys as Flight Safety Officer and conducts duties when assigned the "S" prefix; manages (AFE) functions when required; manages Aerospace Physiology programs at Air Staff, MAJCOM, or FOA staff level.
Related DoD Occupational Group: 260808.

2. Duties and Responsibilities:
2.1. Aerospace Physiology Training:
2.1.1. Plans, executes, and supervises training IAW, Aerospace Physiological Training Program, and associated MAJCOM supplements.
2.1.2. Manages all personnel, programs, and functions of aerospace physiology training flights and local wing flights for aircrew training to include aircrew flight equipment.
2.1.3. Instructs aircrew and other personnel as required on physiological and HF challenges inherent to modern military aviation and prepares the trainee to meet these challenges.
2.1.4. Organizes and prepares instructional materials based on course objectives. Prepares assignments, demonstrations, group activities, training aids, references, and related material required to supplement course objectives.
2.1.5. Coordinates with operations officers, flying safety officers, and staff officers on changes in texts, training project outlines, general class progress, student/trainee disciplinary problems, examination procedures and tests, school records, and related subjects. Develops new training aids. Advises education and training staff officers on such matters as course curricula revision and preparing training materials.
2.1.6. Supervises and ensures safe operation of physiological training devices; hypobaric chambers, reduced oxygen breathing devices (ROBD), hypoxia familiarization trainers, spatial disorientation trainers, Barany chairs, swing landing trainers, lateral drift trainers, night vision device trainers, and centrifuge. Screens trainees before chamber flights/ROBD exposures/centrifuge runs to mitigate physiological reactions due to trainee physical condition. Supervises and performs necessary measures during physiological reactions until relieved by a flight surgeon and/or competent medical authority.
2.1.7. Performs hazardous duty as inside observer during hypobaric chamber flights to ensure student safety and training effectiveness.
2.1.8. Coordinates special evaluation and diagnostic hypobaric chamber flights and centrifuge runs with appropriate line and medical agencies.
2.1.9. Plans, conducts, and advises Air Staff and MAJCOM/A3/A5 agencies on physiology training system requirements, policy, utilization, acquisition, and sustainment.
2.2. Human performance:
2.2.1. Educates aircrew, special warfare, and support personnel on the HF/performance challenges of AF aviation operations and provides strategies/techniques to mitigate these challenges. Participates in flying safety and aircrew performance enhancement programs.
2.2.2. Advises supervisors, unit commanders and wing, command, and staff agencies on effective HF/performance strategies/techniques.
2.2.3. Serves as HF consultant on safety/accident investigations/task forces and physiological events. Develops HF trend analyses in support of AF requirements, policy, programs, and mishap/event mitigation.
2.2.4. Advocates human system integration by advising Air Staff and MAJCOM Requirements, Plans & Programming, and Acquisition agencies on human performance considerations during operational capability development in support of system requirements, specifications, design and sustainment of new and fielded weapon systems.
2.3. High-Altitude Intelligence Surveillance Reconnaissance (HAISR):
2.3.1. Plans, executes, and supervises manned systems (e.g. U-2) IAW the HAISR Program.
2.3.2. Manages organization, training, and equipping of personnel supporting HAISR program.
2.3.3. Develops and manages specialized physiological and AFE training programs to ensure the safety of aircrew assigned to these programs.
2.3.4. Supervises technicians conducting aircrew pre-flight and post-flight preparation, to include donning/doffing of specialized AFE, launching/recovering aircrew at the aircraft, and maintenance of specialized AFE.
2.4. High-Altitude Airdrop Mission Support (HAAMS):
2.4.1. Plans, executes, and supervises HAAMS for AF/DoD mobility airlift operations IAW the High-Altitude Airdrop Mission Support Program.
2.4.2. Performs flying duties in support of HAAMS operations; provides in-flight physiological support to aircrew and other on-board personnel performing duties in unpressurized operations.

2.4.3. Participates in parachuting activities when assigned to "J" prefix manning position IAW AFI 10-3503, Personnel Parachute Program.
2.5. Centrifuge Training:
2.5.1. Plans, executes, and supervises centrifuge training IAW, Aerospace Physiological Training Program and, Centrifuge Training for High-G Aircrew Program.
2.6. Research, Development, Test, and Evaluation (RDT&E):
2.6.1. Acts as technical advisor and manages hypobaric chamber/centrifuge support of operational research conducted through Air Force Research Laboratory and the 711th Human Performance Wing.
2.6.2. Plans, coordinates, and directs aerospace biotechnology acquisition, science, and technology programs. Generates policies and procedures governing establishment and performance of acquisition, science, and technology development projects, including requirements for funds, facilities, material, equipment, and personnel. Resolves technical problems involved in reviewing and interpreting scientific data, formulating new concepts, and recommending new approaches. Directs preparation of technical reports on acquisition, science, and technology projects.
2.6.3. Facilitates human-centered technology transition to warfighters and supports human system integration efforts in System Program Offices.
2.6.4. Plans, develops, and directs aircrew breathing system, AFE, and chemical defense ensemble test and evaluation and special projects.
2.7. Operational Flying:
2.7.1. Regularly participates in flying missions as a non-rated aircrew assigned to an "X" prefix.
2.7.2. Primary Flight Duties:
2.7.2.1. Observe, evaluate, and assist with the unique physiological demands of the Major Weapons System (MWS).
2.7.2.2. Observe, evaluate, and assist with human factors/human performance challenges within the MWS and/or mission set.
2.7.2.3. Observe, evaluate, and assist with aircrew breathing systems, aircrew flight equipment and aircrew/MWS interface.
2.7.2.4. Provide Operational Safety, Suitability, and Effectiveness (OSS&E) lessons learned to existing aircrew training platforms and human systems integration.
2.7.2.5. Functions associated with High Altitude Airdrop Mission Support.
2.8. Flight Safety Officer
2.8.1. Serves as a Flight Safety Officer in a deployed setting, in addition to certain in-garrison settings. Engages in all duties as a Flight Safety Officer as outlined in 91-Series instructions.
2.9. Aircrew Flight Equipment Officer
2.9.1. Serves as Aircrew Flight Equipment Officer when assigned as a primary aircrew member and upon discretion of the Operations Group Commander. May act as Aircrew Flight Equipment Officer at Headquarters functions, when appropriate.
2.10. Staff Functions:
2.10.1. May function at HQ USAF, MAJCOM, or FOA staff in a variety of functions (e.g., AP Program Manager). Coordinates and manages AP program actions at Air Staff, MAJCOM, and FOA level.

3. Specialty Qualifications:
3.1. Knowledge. Thorough understanding of aerospace physiology and closely related subjects is mandatory.
3.2. Education. Refer to Appendix A, 13HX – Aerospace Physiologist, for degree requirements. Post-graduate degree applicants are preferred; but not required. Applicants must have a GPA of 3.0 or higher on a 4.0 scale.
3.3. Career-Field Entry. The following is mandatory as directed:
3.3.1.For entry, award, and retention of 13HX AFSC, physical qualification IAW DAFMAN 48-123 for Flying Class III requirements are mandatory. EXCEPTION: AFPC shall coordinate with 13HX Career Field Manger to conduct a retention determination for fully qualified 13HX personnel who no longer meet Flying Class III requirements. Additionally, strong personal endorsements in areas of initiative, public speaking, and teamwork are highly desirable. Air Force Academy candidates must coordinate their 13H entry application through the department of Biology.
3.4. Training. The following training is mandatory as indicated:
3.4.1. A 13H1 must complete the Air Force Aerospace Physiology Officer 101 course (L3OBP13HX 00AB) to perform the basic duties of an Aerospace Physiologist.
3.4.2. For award of AFSC 13H3 upgrade, all education and training items outlined in the 13H AFJQS and APO Career Field Education and Training Plan (CFETP) must be completed. NOTE: S-V88-AL (Evasion and Conduct After Capture) is a suitable substitute if, S-V97 is not available.
3.5. Experience.
3.5.1. For award of AFSC 13H3, the member must be qualified as an academic instructor/facilitator.
3.5.2. For award of AFSC 13H3, all requirements IAW with the AP Career Field Education & Training Plan (CFETP) and Air Force Job Qualification Survey (AFJQS) must be met within 22 Months.
3.5.3. Those identified with X-Prefix will complete the following initial qualification:
3.5.3.1. Successful completion of AFI 11-202, Vol 2, Chapter 8, open-book examination for AP specific MDS test to meet Universal Qualifications.
3.5.4. Minimum of 5 sorties as non-rated aircrew member in local base aircraft.
3.5.5. Specialty requires routine access to Tier 3 (T3) information, systems or similar classified environments. Completion of a current T3 Investigation required IAW DoDM 5200.02, AFMAN 16-1405, Air Force Personnel Security Program. NOTE: Award of the entry level without a completed T3 Investigation is authorized provided an interim Secret security clearance has been granted according to DoDM 5200.02, AFMAN 16-1405.