

AEROSPACE PHYSIOLOGY TRAINING CENTER

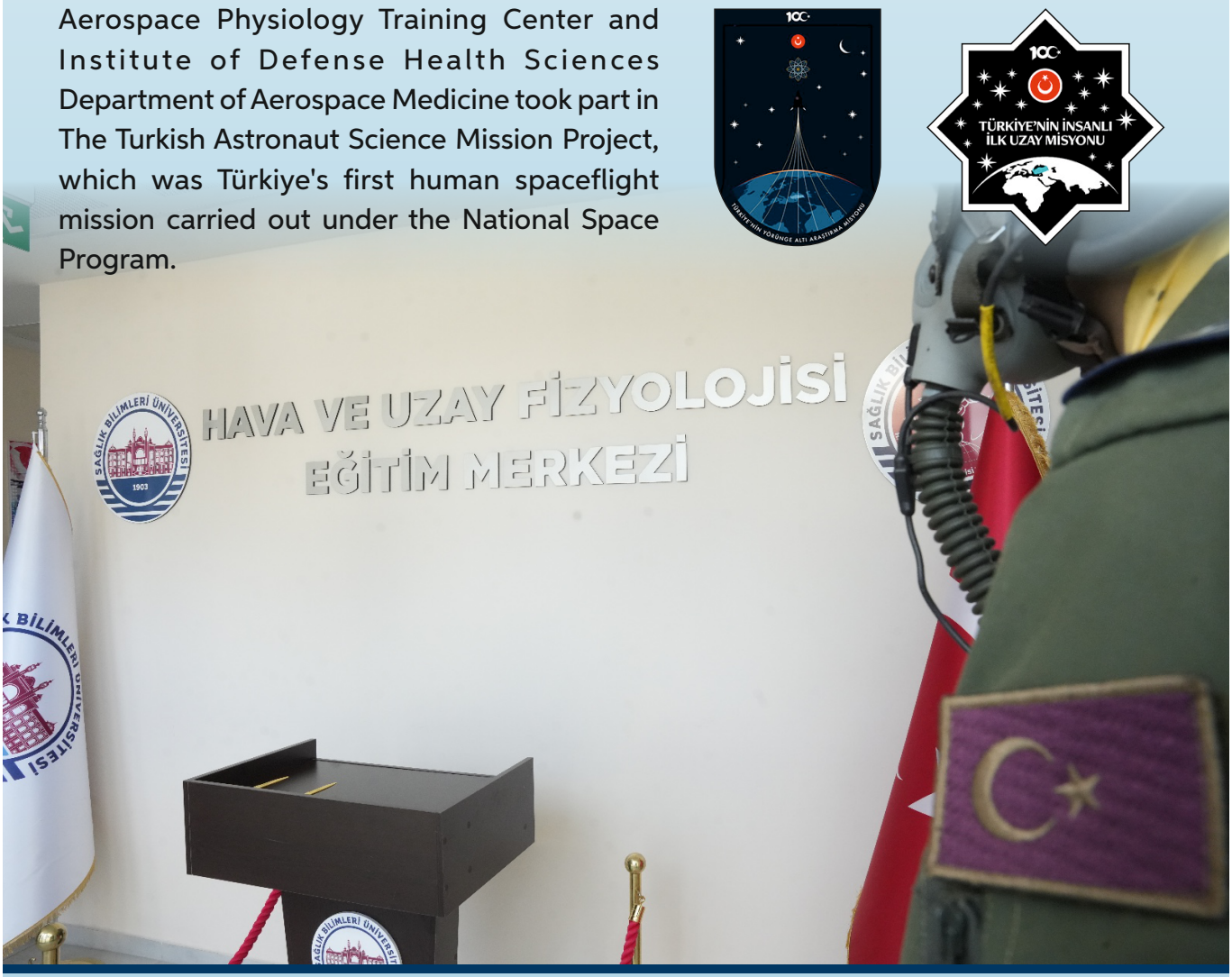
UNIVERSITY OF HEALTH SCIENCES
INSTITUTE OF DEFENSIVE HEALTH SCIENCES

AEROSPACE PHYSIOLOGY TRAINING CENTER

Aerospace Physiology Training Center, established under the auspices of University of Health Sciences, provides high-quality theoretical and practical training for pilots, cabin crew, astronaut candidates, and other aviation personnel working in the aviation sector, in accordance with international standards.

Aerospace Physiology Training Center aims to organize courses for healthcare professionals specializing in aerospace medicine, conduct research on astronaut selection and training, and enhance the knowledge and skills of aviation personnel. It also plays a crucial role in promoting flight safety and preventing aviation and space mission-related accidents through comprehensive training programs and research initiatives addressing health challenges in both aviation and space environments.

Aerospace Physiology Training Center and Institute of Defense Health Sciences Department of Aerospace Medicine took part in The Turkish Astronaut Science Mission Project, which was Türkiye's first human spaceflight mission carried out under the National Space Program.



NORMOBARIC HYPOXIA TRAINING SYSTEM

Normobaric Hypoxia Training System: High altitude hypoxia is a condition caused by a decrease in the partial pressure of oxygen in the breathed air at high altitudes. Normobaric hypoxia training system demonstrates the physiological effects of high-altitude hypoxia in safe conditions at ground level. Oxygen and nitrogen gases can be mixed in certain ratios by the main component of the system, the normobaric hypoxia device, to generate a hypoxic condition equivalent to the desired altitude level.

Normobaric Hypoxia Training: During this training, aviators have the opportunity to experience the adverse effects of high-altitude hypoxia and to recognize their personal hypoxia symptoms.

Hypoxia Inhalation Test (Hypoxic Challenge Test): This test evaluates whether an individual with a chronic illness (such as heart failure, pulmonary disease, or anemia) will need oxygen support during a commercial flight and quantifies the required oxygen if required.

High altitude and hypoxia training may also be provided for mountaineers and professional athletes using the normobaric hypoxia training system, and scientic research can be performed in these areas.



SPATIAL DISORIENTATION TRAINING SYSTEM

Spatial Disorientation (SD) Training System: The SD training system enables aviators to experience in-flight vestibular and visual misperceptions and illusions at ground level using an SD simulator. The SD training simulator has a full replica of a Cessna 172P Glass Cockpit panel, and features computer generated instrumentation with realistic flight controls, and a 3-axis motion system which functions in combination with a textured high-quality out-the-window visual display to create a realistic SD training experience. This system is also used in the management of Motion Sickness desensitization treatment.





SPATIAL DISORIENTATION TRAINING SYSTEM

ILLUSIONS EXPERIENCED IN SD TRAINING SYSTEM

- Graveyard spin
- Leans illusion
- Coriolis illusion
- Oculogyral illusion
- False horizon illusion
- Blackhole approach
- Runway width illusion
- Sloped runway illusion





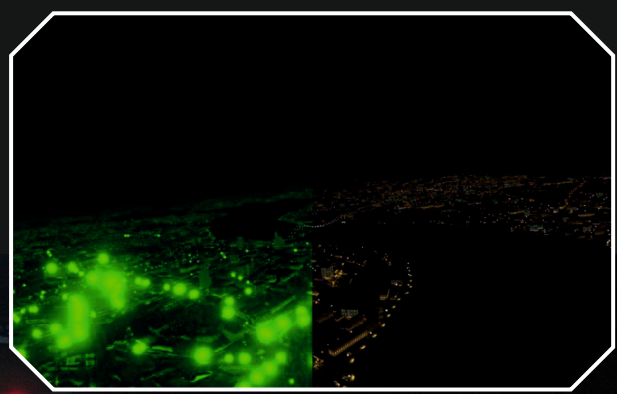
NIGHT VISION TRAINING SYSTEM

Night Vision Training System: This system enables to demonstrate numerous visual illusions and alterations experienced during nighttime flying conditions, featuring around 70 flight scenarios shown in a widescreen with a 4K resolution in a fully dark environment. Night Vision Goggles can be integrated into the system, and the projector contrast can be adjusted to create a night vision goggle view in every flight profile.

This system has the potential to be rated among the most advanced and realistic night vision training systems that are presently in the world.

MAIN ILLUSIONS EXPERIENCED IN NIGHT VISION TRAINING SYSTEM:

- Autokinesis
- False horizon
- IFR landings
- Vection illusion
- Flash blindness
- Glare effect





COURSES AND TRAINING PROGRAMS AVAILABLE IN AEROSPACE PHYSIOLOGY TRAINING CENTER

We support civil and military aviation by providing national and international courses in aerospace and aviation medicine:

Aviation Medicine Course

- Duration: 4 weeks
- Approved and authorized by the Republic of Türkiye Ministry of Health
- Basic and advanced aviation courses
- Meets requirements of Regulation EU 1178/2011

EASA Part MED D.010, Part MED D.015, AMC1 MED.D.020, AMC2 MED.D.020

- Training for Class 1 and Class 2 Aeromedical Examiners (AMEs)

Aviation Medicine Refresher Course

- Duration: 1 week
- Approved and authorized by the Republic of Türkiye Ministry of Health

Aviation Psychology Course

- Duration: 2 weeks

Certification Program for Aeromedical Transport Crew Training

- Duration: 1 week
- Approved and authorized by the Republic of Türkiye Ministry of Health

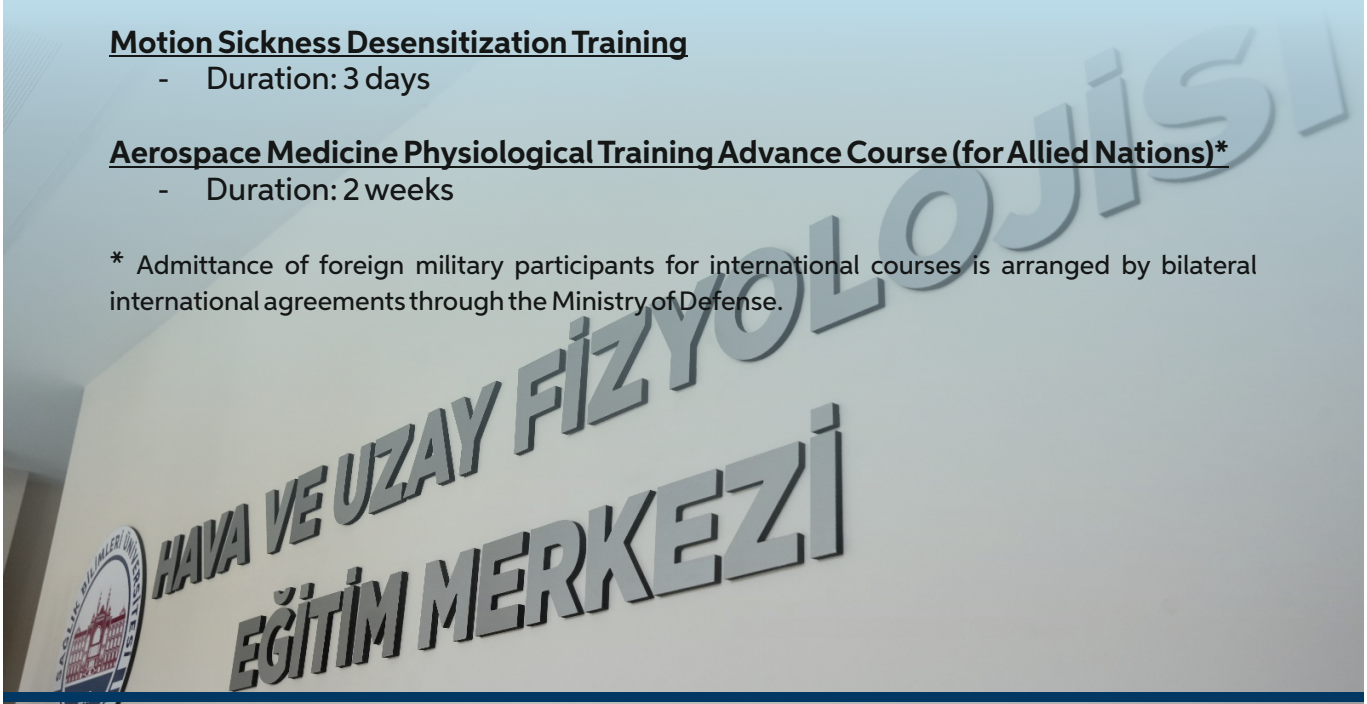
Motion Sickness Desensitization Training

- Duration: 3 days

Aerospace Medicine Physiological Training Advance Course (for Allied Nations)*

- Duration: 2 weeks

* Admittance of foreign military participants for international courses is arranged by bilateral international agreements through the Ministry of Defense.





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