ASU ARIZONA STATE UNIVERSITY

Altitude Chamber

Aviation Physiology & Human Factors Safety Course

What We Do

We specialize in high altitude physiology training with a focus on hypoxia. Hypoxia is a lack of oxygen and can develop in many different ways. The most common way, called hypoxic hypoxia, typically affects those exposed to altitude. Anybody over the age of 18, with a valid FAA medical certificate may participate in chamber training. The Altitude Chamber is available for use by aviation companies, commercial, corporate and government aircrew for training purposes, as well as human subject research and product development and testing. Our chamber is capable of training up to 16 students at a time.

Why Chamber Training?

Hypoxia is well known as the "silent killer." Due to its insidious nature, hypoxia's effects may be difficult to notice but it always causes mental impairment. Hypoxia is also painless, adding to the difficulty in detecting its presence.

Although some symptoms are more common, hypoxia has over 1,000 documented symptoms. Because symptoms are unique to each individual, hypoxia recognition is difficult unless you know what symptoms to look for. By the time an individual determines the symptoms he or she is experiencing are due to hypoxia, it may be too late to treat. This is why hypoxia training is so vital. It provides you with an early warning system to combat the insidious and sometimes pleasant symptoms of hypoxia.

Where

The ASU altitude chamber is located on the ASU Polytechnic campus at 7108 E. Tiburon Ave., in Mesa, Arizona, 85212. The campus is located next to the Phoenix-Mesa Gateway Airport. For out-of-town visitors, we offer special airfare and hotel rates available through ASU's travel agency El Sol Travel. The Hilton Doubletree Phoenix-Gilbert is our hotel of choice located next to San Tan Village Mall (approximately 2.5 miles from the campus).

Link to Google Map:
http://www.asu.edu/map/interactive/?campus=polytechnic&building=ALTCH

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Courses Offered

We offer two different types of hypoxia training courses:

- Standard Course

  Students receive ground course (approx 4 hours), followed by a 40-minute chamber flight up to 25,000 feet where they will experience their hypoxia symptoms. A brief night vision demonstration is also given at 18,000 feet.

- Enhanced Course

  Students receive ground course, followed by all the elements of a standard chamber flight, but also experience an insidious onset of hypoxia from 10,000 to 18,000 feet. They also receive a rapid decompression (RD) from 8,000 feet to 22,000 feet. The decompression is extremely valuable for personnel who are flying or will be flying pressurized aircraft.

Ground Course Topics:

- Physics of the Atmosphere
- Respiration/Circulation
- Hypoxia
- Hyperventilation
- Trapped Gas Problems
- Evolved Gas Disorders
- Vision
- Spatial Disorientation
- Cabin Pressurization/Decompression
- Acceleration
- Noise and Vibration
- Human Factors

Students may enroll in just the Aviation Physiology and Human Factors Safety Course without a chamber flight if they prefer. Upon completion of each course students will receive FAA Part 141 completion certificates and will also receive course materials to take with them.

Cost

Fixed costs are associated with the chamber's operation are split up among the number of participants in the chamber. For this reason, costs are dependent on numbers of participants. The minimum number of participants is 5, for training effectiveness.

	5-8 students	9-12 students	13-14 students	15-16 students
Standard	$400 per person	$275 per person	$200 per person	$175 per person
Enhanced (includes RD)	$450 per person	$325 per person	$250 per person	$175 per person
Ground Only	$70 per person	$50 per person	$50 per person	$50 per person

When

Chamber training courses are scheduled on an as-needed basis on a Monday or Tuesday.

Contact

To schedule training or request further information, please contact:

ASU Altitude Chamber
480-727-1021
Aerotech@asu.edu

Link to ASU Altitude Chamber Website:
hac.asu.edu **REGISTER HERE for training!**

Link to Flight Safety article on hypoxia training:
http://flightsafety.org/hf/hf_nov-dec92.pdf

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