For over 20 years, UND Aerospace has conducted highly specialized, research-based physiology courses for over 140 corporate and commercial organizations. We are proud to present our course specifically for you and your flight crew at one of the world’s premier aviation schools, UND Aerospace.

Our Aerospace Physiology Department is directed by Associate Professor Thomas Zeidlik. Our staff also includes Mr. Steve Martin with 20+ years of aerospace physiology experience, and Mr. Robert Kunze with 40+ years of aviation experience. In addition to aerospace physiology, our team has expertise in oxygen equipment, emergency egress/parachuting, survival, and high G-force training. We hope that you take advantage of our flight physiology training courses so you can get the most current, relevant, and accurate training available to truly enhance your flight safety.

As an aviator, your refined decision-making and problem-solving abilities are crucial during times of extreme stress. It is one thing to read about hypoxia, spatial disorientation, visual illusions, and supplemental oxygen, but it is another thing entirely to experience it firsthand. Just like practicing V1 cuts and other mechanical emergencies, you may have only moments to respond correctly when faced with a physiological problem. At UND Aerospace, our aerospace physiology instructors have the experience and knowledge to thoroughly prepare you for such situations, enabling you to promptly recognize a problem and act quickly and effectively to resolve it.

Aerospace physiology training is highly recommended for professional flight crews by the FAA and IBAC (International Business Aviation Council). Many companies lay claim to providing “altitude physiology” or “hypoxia awareness” training. The simple fact is that UND Aerospace specializes and focuses each course for your specific mission — something no one else does. Our courses are the only ones specifically designed for the corporate and commercial flight mission, exceeding the FAR 61.31 physiology requirements for high altitude flight and exceeding all physiological knowledge recommendations contained in AC 61-107A. Our professional aircrew physiology courses are recognized as some of the best training of its kind in the world.

Join the many national and international flight organizations that have taken advantage of our training, and make UND Aerospace part of your continuing education program, maximizing your human performance in adverse physiological conditions.

UND Aerospace is a certified Emergency Vision Assurance System (EVAS) Training Center, and can perform EVAS training on request. UND Aerospace Physiology is also affiliated with Double Helix Aviation, offering upset Prevention and Recovery Training as well.
**DISCOUNTS FOR 2018** If your company sends a group of 5 or more, a 20% discount for all participants from the same organization will be credited during the booking process.

**NOTE** Specialized courses are available by request. We can tailor our subject matter to flight attendants, sensor operators, or executive passengers specific presentations, and "on-site" academics for your crews. Contact us for details.

### COURSE DESCRIPTIONS

1. **One-Day Fixed Wing Course**: $595 per aircrew member. Highly recommended for pilots of unpressurized aircraft.

2. **Aeromedical Transport/Helicopter Course**: $695 per aircrew member. Highly recommended for pilots, flight technicians & flight attendants of multi-engine turbo-prop, corporate, commuter and commercial aircraft who have taken this training previously, or officers of single-engine turbo-prop aircraft.

3. **FAA Part 61.31/FAA AC 61-107B One-Day/Recurrent High Altitude Fixed Wing Course**: $795 per aircrew member. Highly recommended for pilots, flight technicians & flight attendants of multi-engine turbo-prop, corporate, commuter and commercial aircraft who have taken this training previously, or officers of single-engine turbo-prop aircraft.

4. **Fixed-Wing Sensor Operators Course**: $995 per aircrew member. Highly recommended for pilots, flight technicians & flight attendants of multi-engine turbo-prop and turbine aircraft.

5. **FAA Part 61.31/FAA AC 61-107B Two-Day/High Altitude Fixed Wing Course**: $995 per aircrew member. Highly recommended for pilots, flight technicians & flight attendants of multi-engine turbo-prop, corporate, commuter and commercial aircraft.

### TOPIC DESCRIPTIONS

**Low/High Altitude Atmosphere** – Investigate atmospheric changes with altitude, increased radiation effects, climate change and aviation, turbulence, and high-altitude conditions.

**Respiration & Circulation** – Investigate how human respiration and circulation work under normal circumstances, and what specific changes at altitude. Discuss methods of maximizing biological efficiency.

**Human Vision & Orientation** – Discuss human vision and anomalies to vision, factors affecting visual illusions in the various phases of flight, automated orientation and the hazards of such, enhanced visual systems, overcoming visual illusions in flight and during approaches and landings, physical hazards of vision, and laser strike hazards and mitigation.

**Hypoxia/Hyperventilation** – Discuss the four types of hypoxia and associated factors (altitude, medication, smoke and fumes, rapid decompressions, etc.). Discuss causal factors, symptoms, factors influencing hypoxia, and recognized treatment methodology.

**Trapped/Evolved Gas** – Discuss the affected areas of the body, causal factors, symptoms, factors influencing the various maladies, and treatment options.

**Noise & Vibration** – Discuss noise and vibration energy and transmission, sound, vibrational & noise concepts, detrimental physiological effects, human limits of noise/vibration, anti-noise and vibration strategies.

### PRICE

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<tr>
<th>Course</th>
<th>One-Day Recurrent High Altitude Fixed Wing</th>
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<td>HYPOXIA DEMO</td>
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<td>$995</td>
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<td>AVIATION HUMAN FACTORS/FATIGUE</td>
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<tr>
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<td>AIRCRAFT IMPACT SURVIVAL</td>
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### AIRCRAFT IMPACT SURVIVAL
- Discuss the most dangerous phases of flight, impact concerns and human tolerances, injury patterns, preparation for impact and safe egress of aircraft.

### OXYGEN EQUIPMENT
- Discuss the various types of equipment available for pilots, cabin crew, and passengers, proper utilization of the equipment, pre- and in-flight inspection of oxygen systems, and new technology.

### HIGH ALTITUDE CHAMBER FLIGHT/NIGHT VISION DEMONSTRATION
- Experience an altitude chamber flight to FL250 to practice oxygen equipment inspection and usage. Learn the effects of pressure change, experience slow and rapid-onset hypoxia recognition and recovery techniques, and experience a hypoxic visual impairment demonstration.

### HYPXIA DEMO REVIEW/CRTIQUE
- Review the chamber flight with our instructors via discussion and video review of hypoxia demonstration.

### AVIATION HUMAN FACTORS/FATIGUE
- Discuss fatigue and stress factors with our Aeromedical Examiner, including causal factors, symptoms and recognition, treatment strategies for individuals, and departmental Fatigue Risk Management Systems (FRMS).

### CABIN DEPRESSURIZATION
- Discuss the different types of pressurization systems, causal factors and recognition of slow, rapid, and explosive decompressions, physiological and physical indications and hazards of decompressions, and proper response strategies to implement in the event of a decompression.

### RAPID DECOMPRESSION FLIGHT
- Experience a rapid decompression in a realistic environment, allowing crew members to practice proper response techniques in a controlled situation using actual aircraft oxygen equipment.

### SPATIAL DISORIENTAION
- Discuss human orientation and disorientation issues, factors affecting orientation, automation interaction issues, physiological response during disorientation, and mitigation methods to employ when disoriented.

### SPATIAL DISORIENTAION LAB
- Experience disorientation in a full-motion simulator and employ proper corrective actions.

### 2018 COURSE SCHEDULE

- **January**: 17-18, 24-25
- **February**: 7-8, 21-22
- **March**: 7-8, 21-22
- **April**: 11-12, 25-26
- **May**: 9-10, 23-24
- **June**: 6-7, 20-21
- **July**: 25-26
- **August**: 8-9
- **September**: 12-13, 26-27
- **October**: 10-11, 24-25
- **November**: 7-8, 28-29
- **December**: 5-6, 12-13