

NASTAR CENTER TRAINING PROGRAMS

Passengers

- Basic Suborbital Space Training
- Space Scientist Training
- Space Suits and Systems Training

Pilots and Crew

- Situational Awareness Training
- Spatial Disorientation Training
- Upset Prevention and Recovery Training
- Hypobaric (High-Altitude) Training
- Land and Water Survival Training

Mission Control Operators

- Emergency Disaster Management Training

AeroSpace Medicine (coming soon)

- AeroMedical Examiner (AME) Space Physiology Training
- Space Medicine and Health



BASIC SUBORBITAL SPACE TRAINING

Aim

This program is designed to provide future space travelers with the core knowledge and skills to become a safe, confident and capable suborbital spaceflight participant.

Content

- Aerospace Environment
- Space Vehicles & Flight
- Motion Environment & Orientation
- Acceleration Forces
- Life Support Systems and Suits
- Space Experience
- Physiological and Psychological Effects
- G Protection, Countermeasures & Skills
- Space Safety and Emergency Procedures
- Maximizing your Spaceflight Experience
- Keeping and Preserving Space Memories
- G-Tolerance Flights and Simulated Space Flights in Phoenix Centrifuge

Duration

2 days

Equipment

Phoenix Centrifuge

Prerequisites

- FAA Class 3 Medical Certificate or equivalent
- Trainees are expected to be in a good state of health and physically capable of taking part in all course activities

Certification

All persons who successfully complete the program based on performance standards will receive a NASTAR Center certificate of completion and a NASTAR course card

Registration

NASTAR Training Center located at 125 James Way in Southampton, PA. 18966, USA. To schedule, please contact us at 866.482.0933 or email us at info@nastarcenter.com



SPACE SCIENTIST

Aim

This program is designed to provide researchers, scientists, and graduate students with the knowledge and skills to design, plan, and fly experiments in suborbital space.

Content

- Space Research Types
- Environmental Considerations
- Payload Safety Considerations
- Vehicle Types and Operating Environments
- Vehicle Payload Interface
- Operational Considerations in Space
- Time/Distracted Management
- Contingency Planning
- Design and Conduct Experiment
- Simulated Space Flights to Conduct Experiment in Phoenix Centrifuge

Duration

1 day (8 hours)

Equipment

Phoenix Centrifuge

Prerequisites

- Completion of Basic Space Training Course (2 Days)
- FAA Class 3 Medical Certificate or equivalent
- Trainees are expected to be in a good state of health and physically capable of taking part in all course activities

Certification

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SPACE SUITS & SYSTEMS

Aim

This program is designed with a spacesuit manufacturer to provide Space Launch Operators, Pilots, Crew and Passengers with the knowledge and skills necessary to don and use their protective life support equipment effectively in both nominal and emergency situations.

Content

- Protective Equipment & Use
- Altitude Physiology
- Effects of Pressure Change
- Hypoxia & Hyperventilation
- Oxygen & Life Support Systems
- Communications
- Mobility/Maneuverability
- Crew Escape & Emergency Scenarios
- Altitude Chamber 'flight'

Duration

1 Day

Equipment

Altitude Chamber
Space Pressure Suit

Prerequisites

- Spacesuit manufacturer to be specified and space suit provided
- FAA Class 3 Medical Certificate or equivalent
- Trainees are expected to be in a good state of health and physically capable of taking part in all course activities

Certification

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SITUATIONAL AWARENESS

Aim

This program is designed to provide pilots with the knowledge and skills to maintain a continuous perception of self and aircraft in relation to environment during flight.

Content

- Situational Awareness Situations
- Conscious and Preconscious Information Processing
- Mitigating Situational Awareness
- Introduction to Crew Resource Management
- Anomalies of Attention
- Forecasting and Executing Perception-Based Tasks
- Simulated Flights in Gyroflight

Duration

1 Day

Equipment

Gyroflight Trainer

Prerequisites

- FAA Class 3 Medical Certificate or equivalent
- Trainees are expected to be in a good state of health and physically capable of taking part in all course activities

Certification

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SPATIAL DISORIENTATION

Aim

This program is designed to provide pilots with the knowledge and skills to handle visual and vestibular illusions that are frequently encountered in flight.

Content

- Motion Environment & Orientation
- Vision & Spatial Disorientation
- Orientation, Perception & Illusions
- Spatial Disorientation Management
- Conscious & Preconscious Information Processing
- Spatial Disorientation Training Flights
- Simulated Flights in GYROlab or Gyroflight

Duration

1 Day

Equipment

GYROlab (GL) 1500 or Gyroflight Trainer

Prerequisites

- FAA Class 3 Medical Certificate or equivalent
- Trainees are expected to be in a good state of health and physically capable of taking part in all course activities

Certification

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UPSET RECOVERY & PREVENTION

Aim

This program is designed to provide pilots with the knowledge and skills necessary to identify and recover from upset scenarios. The course features hands-on exposure to different Loss of Control In-flight (LOC-I) situations using unique simulation technology.

Content

- Types and Classes of Aircraft Upsets
- Loss of Consciousness In-Flight Causes and Effects
- Upset Detection and Recognition
- Flight Characteristics Familiarization and Lift Vector Control
- Basic Recoveries to Common/Past Upsets
- Health & Wellness
- Simulated Flights in GL-1500 and/or Phoenix Centrifuge
 - GL-2000 Familiarization Flight
 - Lift Vector Control Exercises
 - Extreme Maneuvering Exercises
 - Upset Demonstration and Performance Exercises
 - Proficiency Assessment Session

Duration

1 Day

Equipment

GyroLab (GL) 1500

Phoenix Centrifuge

Prerequisites

- FAA Class 3 Medical Certificate or equivalent
- Trainees are expected to be in a good state of health and physically capable of taking part in all course activities

Certification

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HYPOBARIC (HIGH ALTITUDE)

Aim

This program is designed for anyone interested in understanding how to identify symptoms and properly handle low-oxygen and rapid decompression situations safely and effectively.

Content

- Aerospace Environment
- Physiological Effects of Pressure Change
- Altitude Physiology (Respiration and Circulation)
- Hypoxia and Hyperventilation & Management
- Oxygen & Life Support Systems
- Time of Useful Consciousness
- Health & Wellness
- Pressure Equalization
- Altitude Chamber Flight

Duration

1 Day

Equipment

Altitude Chamber

Prerequisites

- FAA Class 3 Medical Certificate or equivalent
- Trainees are expected to be in a good state of health and physically capable of taking part in all course activities

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LAND & WATER SURVIVAL

Aim

This program is designed with Survival Systems, USA to provide pilots, crew, and passengers with the knowledge and skills needed to survive unanticipated land or water landings and/or other episodes where rescue may be required.

Content

- On-Board Hazards and Emergencies
- Fire Fighting in the Cabin/Cockpit
- Evacuation and Escape
- Vehicle Ditching Scenarios & Techniques
- Search and Rescue
- Safety and Survival Equipment Utilization and Deployment
- Effects of Hypothermia and Hyperthermia, Mitigation and Survival
- Survival Psychology
- Personal Rescue Techniques (signaling, flotation devices, etc)
- Fire and Shelter Wilderness Survival Techniques
- First Aid/Medical Scenarios
- Dry/Wet Evacuation Training Through an Emergency Exit on Water

Duration

2 Days

Equipment

Water Survival Simulator System
Outdoors (for land survival)

Prerequisites

- FAA Class 3 Medical Certificate or equivalent
- Trainees are expected to be in a good state of health and physically capable of taking part in all course activities

Certification

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Registration

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Partnership with Survival Systems, USA may require off-site training. To schedule, please contact us at 866.482.0933 or email us at info@nastarcenter.com



EMERGENCY DISASTER MANAGEMENT

Aim

This program is designed to provide Mission Control Operators and/or Ground Crew Personnel with the knowledge and skills necessary to effectively manage ground-based emergency scenarios surrounding a space launch or landing.

Content

- Save lives and mitigate damages by making the right decisions
- Organize and deploy resources in a safe and efficient manner
- Strategic emergency and crisis management coordination
- Dynamic Risk Assessment
- Apply Standard Operating Procedures
- Facilitate continuity of operations
- Practice Planning and Mapping for Command Post Staff
- Test and validate emergency response plans

Duration

2 Days

Equipment

Advanced Disaster Management Simulator (ADMS)

Prerequisites

- Trainees are expected to be in a good state of health and physically capable of taking part in all course activities

Certification

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