

RESCUE
TRAINING

Rescue Technician > Advanced Training

Elevated Anchors

Establishing an elevated anchor can greatly improve the efficiency, effectiveness, and safety of a high angle rope system. This *three-day* course focuses on the physical principles of all types of elevated anchors (monopods, bipods, tripods, and tetrapods). A series of field exercises ensures that students can set up and deploy these systems safely.

Pre-requisites: Students who attend this class must have basic rope skills including knot-tying, constructing anchors, and operating mainlines and belay lines.

Course Outline

Introduction to Elevated Anchors

- Basic Applications
- Types of Anchors
- NFPA and OSHA Requirements

Physics of Elevated Anchors

- Vectors: Calculating Resultants
- Friction Effects
- Static Systems Safety Factors
- Fall Factors
- Impact Forces
- Compression and Tension

Rigging Elevated Anchors

- Scene size-up
- Footing Considerations
- Tensioning and Back Ties

Special Applications

- Terradapter
- Arizona Vortex
- Improvised Anchors
- Natural Anchors

Training Objectives

At the completion of this class, the students should be able to:

1. Describe the application of commonly used elevated anchors in rope systems.
2. List the NFPA and OSHA requirements for anchors.
3. Calculate the potential forces (both static and shock) to which the anchor may be exposed.
4. Describe how the design and construction of an elevated anchor effects its performance.
5. Calculate the direction and magnitude of forces placed on component of the anchor.
6. List the preferred applications and safety considerations for various common elevated anchors.
7. Design and rig a safe and secure:
 - Monopod, Bipod, Tripod, Tetrapod
 - Improvised, Natural Anchor
 - Cantilevered Anchor (T-frame)

Other Programs in this Series:

Managing the Rescue Incident: Two Days
Advanced Rigging Concepts: Three Days
Force Multipliers– Rope Physics: Three Days
Confined Space Rescue Technician: Four Days
Advanced Horizontal Rope Systems: Five Days