

# DIVE ALASKA!

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## Recreational Diver Level 3 - Trimix Diver

### Purpose

The GUE Recreational Diver level 3 course is a mastery-level recreational class structured to prepare divers for deeper recreational diving using proper equipment, diving techniques and breathing mixtures. In this class, students will be introduced to the theory and practice of limited decompression and trained in correct ascent procedures. Recreational Diver level 3 training also builds on the fundamental skills learned in previous GUE Recreational courses (GUE Fundamentals, GUE Recreational Diver Level 1 and level 2) and is designed to cultivate the essential skills required for safe diving at greater depths. The training includes refinement of fundamental skills, problem identification and resolution as a means of building capacity for progressively more challenging dives including:

- the use of double, back-gas tanks/cylinders
- the use of Nitrox for decompression
- the use of Helium to minimize narcosis, CO<sub>2</sub> accumulation and post-dive “nitrogen stress”; and
- the use of a single decompression cylinder for staged decompression techniques

### Prerequisites

1. Must meet GUE General Course Prerequisites as outlined in [Section 1.6](#)
2. Must be a minimum of 18 years of age
3. Must be GUE Recreational Level 2 or GUE Fundamentals certified
4. Must have a minimum of seventy-five non-training dives, ten dives using doubles

### Duration

The GUE Recreational Level 3 class is normally conducted over a five-day period. It involves a minimum of forty hours of instruction, encompassing both classroom and in-water work.

## Course Limits

1. General Training Limits as outlined in [Section 1.4](#)
2. Student-to-instructor ratio is not to exceed 6:1 during land drill or surface exercises, but cannot exceed 3:1 during any direct in-water training. In-water ratios should be adjusted downward to account for bad conditions and/or poor visibility.
3. Maximum depth of 39 m / 130 ft
4. No overhead environment diving
5. Dives should not be planned to incur more than 15 minutes of decompression
6. A maximum allowed bottom time of 15 minutes at maximum depth

## Course Content

The GUE Recreational Diver level 3 course normally involves a minimum of forty hours of instruction designed to provide a working knowledge of oxygen-enriched air diving as well as normoxic and hyperoxic Trimix; this overview includes instruction in proper decompression procedures with hyperoxic mixes, including the use of decompression tables and proper ascent practices. Fundamental aspects of physics and physiology will be reviewed as a means to support safe diving at greater depths. Divers will also be trained in the proper operational and dive planning procedures necessary to conduct recreational dives in deeper water, including accident management and problem resolution. The course includes eight hours of academics and eight dives. Of these dives, six will be critical skill dives and two will be experience dives.

## Required Training Materials

Doing it Right: The Fundamentals of Better Diving. Jarrod Jablonski, GUE, 2001, High Springs, Florida.

## Recommended Training Materials

1. *Beginning With the End in Mind: The Fundamentals of Recreational Diving.* Jesper Berglund, GUE, 2008, Stockholm, Sweden.

## Academic Topics

1. Introduction and class overview
  - GUE Overview
  - GUE Diver Training
  - GUE Rec Diver Level 3 Overview
2. Breathing gas dynamics
  - The Basic of Breathing Gases
  - Oxygen
  - Narcosis
  - Mixed Gas Diving
3. Dive planning and gas management
  - Dive Planning

- Breathing Gas Strategies
- Breathing Gas Requirements
- Gas Management
- 4. Decompression dynamics
  - The Mysterious Malady
  - The Basics of Decompression
  - Calculating Decompression
  - Decompression Illness

## **Land Drills & Topics**

1. Team formation and communication
2. Gas switch
  - Decompression bottle configuration
  - Decompression bottle placement
  - Gas switch procedures
  - Stowing
  - Communication and signals
3. Valve operation
  - Valve/Manifold overview and operation
  - Review common failures
  - GUE valve drill
  - Problem identification
  - Problem resolution
4. Reserve equipment use
  - Reserve light deployment
  - Reserve mask deployment
5. Field drill reviews
  - SMB deployment
  - S-drill
6. GUE-EDGE and Pre-dive drill

## **Required Dive Skills & Drills**

1. All skills and drills as outlined in General Diving Skills, [Section 1.5](#)
2. Must be able to swim at least 300 yards/275 meters in under fourteen minutes without stopping. This test should be conducted in a swimsuit and, where necessary, appropriate thermal protection.
3. Must be able to swim a distance of at least 16 yards/15 meters on a breath hold
4. Demonstrate reasonable proficiency in valve management.
5. Demonstrate good buoyancy and trim, i.e. approximate reference maximum of 30 degrees off horizontal while remaining within 5 feet/1.5 meters of a target depth. Frequency of buoyancy variation and the divers control of their buoyancy and trim are important evaluation criteria.
6. Comfortably demonstrate good frog and flutter propulsion techniques and a minimum of one propulsion method that would be appropriate for delicate and/or silty environments.
7. Students should demonstrate comprehension of the components necessary for a successful backward kick and helicopter turn.
8. Demonstrate proficiency in the use of a primary light including passive and active communication.
9. Demonstrate reasonable proficiency with using a single decompression cylinder.
10. Demonstrate proficiency in gas-sharing scenarios to include a direct ascent.

11. Demonstrate reasonable proficiency with valve-management by conducting a GUE “valve drill” which includes: shutting down one’s valve, switching regulators and returning the valve to an open position.
12. Demonstrate proficiency with proper ascent/descents, including the implementation of SMB usage, deep stops and safe gas switches.
13. Demonstrate good situational awareness