

## 2.2.2 GUE Fundamentals Part 2

### 2.2.2.1 Course Outcomes

The GUE Fundamentals Part 2 course is designed to continue to cultivate the essential skills required for sound diving practice. Included among its course outcomes are: to provide the recreational diver, who does not desire diver training beyond the recreational level, with an opportunity to advance their basic diving skills; to train divers in the theory and practice of nitrox; to provide those divers who aspire to more advanced diver training with the tools that will contribute to a greater likelihood of success; and to provide divers with a gateway into advanced GUE training.

### 2.2.2.2 Prerequisites

Applicants for a GUE Fundamentals Part 2 course must:

- a. Submit a completed Course Registration Form, Medical History Form, and Liability Release Form to GUE HQ.
- b. Hold insurance that will cover diving emergencies such as hyperbaric treatment, e.g., DAN Master-level insurance or equivalent.
- c. Be physically and mentally fit.
- d. Be a nonsmoker.
- e. Obtain a physician's prior written authorization for the use of prescription drugs, except for birth control, or for any medical condition that may pose a risk while diving.
- f. Be a minimum of 16 years of age. Documented parental or legal guardian consent must be submitted to GUE HQ when the participant is a minor.
- g. Be a certified GUE Recreational Diver Level 1 diver, or have successfully completed GUE Fundamentals Part 1.

### 2.2.2.3 Course Content

The GUE Fundamentals Part 2 course is normally conducted over three days. It requires a minimum of four dives and at least twenty hours of instruction, encompassing classroom lectures, land drills, and in-water work.

### 2.2.2.4 GUE Fundamentals Part 2 Specific Training Standards

- a. Student-to-instructor ratio is not to exceed 8:1 during land drill or surface exercises; it cannot exceed 4:1 during any in-water training.
- b. Two dives must be at a depth of at least 25 ft/8 m.
- c. Maximum depth of 60 ft/18 m
- d. No overhead diving
- e. All dives must be within minimum decompression limits (MDLs), i.e., no required stops.
- f. Can be combined with GUE Triox Primer, as per the Triox Primer Instructor Guidelines document.

### 2.2.2.5 Required Training Materials

GUE training materials and recommended reading as determined by the course study packet received via online download after GUE course registration.

### 2.2.2.6 Academic Topics

- a. Introduction: GUE organization and course overview (objectives, limits, expectations)
- b. Situational awareness
- c. Dive planning and gas management
- d. Breathing gas overview
- e. Nitrox diving
- f. Decompression overview and minimum decompression procedures
- g. Diving safety and accident prevention
- h. The GUE system

### 2.2.2.7 Land Drills and Topics

- a. Dive team protocols
- b. S-drill and valve drill
- c. Surface marker buoy (SMB) deployment
- d. Diver rescue techniques (for Technical rating only)

### 2.2.2.8 Required Dive Skills and Drills

#### 2.2.2.8 (A) Required Dive Skills and Drills for a GUE Fundamentals - Recreational Rating

- a. Must be able to swim at least 300 yds/275 m in less than 14 minutes without stopping. This test should be conducted in a swimsuit and, where necessary, appropriate thermal protection.
- b. Must be able to swim a distance of at least 50 ft/15 m on a breath hold while submerged.
- c. Demonstrate proficiency in safe diving practices, including pre-dive preparation, in-water activity, and post-dive assessment.
- d. Demonstrate awareness of team member location and a concern for safety, responding quickly to visual indications and dive partner needs.
- e. Demonstrate good buoyancy and trim, i.e., approximate reference is a maximum of 30 degrees off horizontal while remaining within 5 ft/1.5 m of a target depth.
- f. Demonstrate proficiency in surface marker buoy deployment while using a spool.
- g. Efficiently and comfortably demonstrate how to donate gas to an out-of-gas diver in multiple gas-sharing scenarios.
- h. Efficiently and comfortably demonstrate how to donate gas to an out-of-gas diver followed by an ascent to the surface utilizing minimum decompression.
- i. Demonstrate a safe and responsible demeanor throughout all training.
- j. Demonstrate proficiency in underwater communication.
- k. Demonstrate a comfortable demeanor while swimming without a mask in touch contact, followed by a switch to the backup mask.
- l. Demonstrate aptitude in the following open water skills: mask clearing, mask removal and replacement, regulator removal and exchange, long hose deployment.
- m. Demonstrate safe ascent and descent procedures.
- n. Demonstrate proficiency in executing a valve drill.
- o. Demonstrate basic equipment proficiency and an understanding of the GUE equipment configuration.
- p. Demonstrate three propulsion techniques, including comprehension of the components necessary for a successful backward kick.

### **2.2.2.8 (B) Required Dive Skills and Drills for a GUE Fundamentals - Technical Rating**

This rating is required for those trainees seeking entry into GUE's Cave and Technical courses.

- a. Must be able to swim at least 300 yds/275 m in less than 14 minutes without stopping. This test should be conducted in a swimsuit and, where necessary, appropriate thermal protection.
- b. Must be able to swim a distance of at least 50 ft/15 m on a breath hold while submerged.
- c. Demonstrate proficiency in safe diving practices, including pre-dive preparation, in-water activity, and post-dive assessment.
- d. Demonstrate awareness of team member location and a concern for safety, responding quickly to visual indications and dive partner needs.
- e. Demonstrate good buoyancy and trim, i.e., approximate reference is a maximum of 20 degrees off horizontal while remaining within 3 ft/1 m of a target depth.
- f. Demonstrate proficiency in the ability to deploy a surface marker buoy while using a spool.
- g. Efficiently and comfortably demonstrate how to donate gas to an out-of-gas diver in multiple gas-sharing scenarios.
- h. Efficiently and comfortably demonstrate how to donate gas to an out-of-gas diver followed by an ascent to the surface utilizing minimum decompression.
- i. Demonstrate a safe and responsible demeanor throughout all training.
- j. Demonstrate proficiency in underwater communication.
- k. Demonstrate a comfortable demeanor while swimming without a mask in touch contact, followed by a switch to the backup mask.
- l. Demonstrate aptitude in the following open water skills: mask clearing, mask removal and replacement, regulator removal and exchange, long hose deployment.
- m. Demonstrate safe ascent and descent procedures.
- n. Demonstrate an efficient valve drill with double tanks.
- o. Demonstrate basic equipment proficiency and an understanding of the GUE equipment configuration.
- p. Demonstrate proficiency in four propulsion techniques that would be appropriate in delicate and/or silty environments, including competence in the backward kick and helicopter turns.
- q. Demonstrate proficiency with a primary light by using it during all skills except SMB deployment.
- r. Demonstrate diver rescue techniques, including effective management of an unconscious diver underwater.

### **2.2.2.9 Equipment Requirements**

#### **2.2.2.9 (A) Equipment Requirements for a GUE Fundamentals - Recreational Rating**

GUE base equipment configuration as outlined in Appendix A.

Prior to the commencement of the class, students should consult with a GUE representative to verify equipment requirements and appropriateness of any selected equipment.

#### **2.2.2.9 (B) Equipment Requirements for a GUE Fundamentals - Technical Rating**

GUE base equipment configuration as outlined in Appendix A, plus:

- a. GUE double tank configuration
- b. One primary and two backup lights

Prior to the commencement of the class, students should consult with a GUE representative to verify equipment requirements and appropriateness of any selected equipment.

## Appendix A - GUE Base Equipment Configuration

The GUE base equipment configuration is comprised of:

- a. Tanks/cylinders: Students may use a single tank/cylinder with a single- or dual-outlet valve. Students may also use dual tanks/cylinders connected with a dual-outlet isolator manifold, which allows for the use of two first stages. Dual tanks/cylinders connected with a dual-outlet, non-isolator manifold can be used, but only in recreational (no decompression) diving, and are considered an alternative for a single tank/cylinder. Consult course-specific standards and your instructor to verify size requirements.
- b. Regulators:
  - i. Single tank: The first stage must supply a primary second stage via a 5 to 7 ft/1.5 to 2 m hose. A backup second stage must be necklaced and supplied via a short hose. The first stage must also supply an analog pressure gauge, inflation for the buoyancy compensator (BC), and (when applicable) inflation for a drysuit.
  - ii. Double tank: One first stage must supply a primary second stage via a 5 to 7 ft/1.5 to 2 m hose (7 ft/2 m hose is required for all cave classes), and inflation for the buoyancy compensator (BC). The other first stage must supply a necklaced backup second stage via a short hose, an analog pressure gauge, and (when applicable) inflation for a drysuit.
- c. Backplate system:
  - i. Is held to the diver by one continuous piece of webbing. This webbing is adjustable and uses a buckle to secure the system at the waist.
  - ii. A crotch strap is attached and looped through the waistband to prevent the system from riding up a diver's back.
  - iii. The continuous webbing must support five D-rings;
    - 1. The first placed at the left hip
    - 2. The second placed in line with a diver's right collarbone
    - 3. The third placed in line with the diver's left collarbone
    - 4. The fourth and fifth are placed on the front and back of the crotch strap when divers plan to use advanced equipment such as DPVs.
  - iv. The harness below the diver's arms has small restrictive bands to allow for the placement of backup lights. The webbing and system retains a minimalist approach.
- d. Buoyancy compensation device (BC):
  - i. A diver's BC is back-mounted and minimalist in nature.
  - ii. It is free of extraneous strings, tabs, or other material.
  - iii. There are no restrictive bands or restrictive elastic affixed to the buoyancy cell.
  - iv. Wing size and shape is appropriate to the cylinder size(s) employed for training.

- e. At least one time/depth measuring device
- f. Wrist-mounted compass
- g. Mask and fins: Mask is low-volume; fins are rigid, non-split.
- h. Backup mask
- i. At least one cutting device
- j. Wetnotes with pencils
- k. Surface marker buoy (SMB) with spool: when required, the SMB should be appropriate for environmental conditions and deployed using a spool with at least 100 ft/30 m of line.
- l. Exposure suit appropriate for the duration of exposure

### Additional Course-Specific Equipment

- a. Where required, back gas and stage cylinders are marked in accordance with the GUE General Training Standards, Policies, and Procedures document and configured in line with GUE protocols.
- b. When drysuit inflation systems are applicable, they should be sized appropriately for the environment; small tanks are placed on the left side of the backplate with larger supplies affixed to the diver's left back gas tank.
- c. Underwater lights:
  - i. When required, backup lights should be powered by alkaline batteries (not rechargeable) and stowed on the D-rings at a diver's chest.
  - ii. Backup lights should have a minimal amount of protrusions and a single attachment at the rear.
  - iii. The primary light should consist of a rechargeable battery pack and be fitted with a Goodman-style light handle.
  - iv. When burn time requirements create the need for an external battery pack, it should reside in a canister mounted on the diver's right hip.
- d. Guideline devices, as required during cave diving activities:
  - i. A primary reel is required for all cave diving and provides a minimalist form factor with a handle designed to support a Goodman or "hands free" handle operation. The primary reel must contain at least 150 ft/45 m of line.
  - ii. A safety spool is required for each diver while cave diving and must contain at least 150 ft/45 m of line.
  - iii. A jump or gap spool is required during Cave 2 diving and must contain at least 75 ft/23 m of line.