

2.2.8 Drysuit Primer

2.2.8.1 Course Outcomes

GUE's Drysuit Primer is a non-certification course designed to prepare divers for drysuit diving using proper equipment and techniques. Course outcomes include, but are not limited to: buoyancy and trim practice and refinement; types, fitting, and use of drysuit, drysuit inflation system, and undergarments; cold water diving specifics; and basic failures related to drysuit diving.

2.2.8.2 Prerequisites

Applicants for a Drysuit Primer must:

- a. Submit a completed Course Registration Form, Medical History Form, and Liability Release Form to GUE HQ.
- b. Be physically and mentally fit.
- c. Hold insurance that will cover diving emergencies such as hyperbaric treatment, e.g., DAN Master-level insurance or equivalent.
- 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 certified, at minimum, as an autonomous entry-level scuba diver (or equivalent) from a recognized training agency.

2.2.8.3 Course Content

The Drysuit Primer is normally conducted over one day. It requires a minimum of two dives and at least eight hours of instruction, encompassing classroom lectures, land drills, and in-water work.

2.2.8.4 Drysuit Primer Specific Training Standards

- a. Student-to-instructor ratio is not to exceed 6:1 during land drills or surface exercises; it cannot exceed 3:1 during any in-water training.
- b. Can be run with one trainee
- 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.

2.2.8.5 Training Materials

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

2.2.8.6 Academic Topics

- a. Introduction: GUE organization and course overview (objectives, limits, expectations)
- b. GUE equipment configuration
- c. Drysuit introduction and selection
- d. Undergarment selection

- e. Drysuit inflation system
- f. Coldwater equipment considerations, dive planning, and logistics
- g. Pre-dive sequence
- h. Situational awareness
- i. Trim and buoyancy
- j. Drysuit maintenance and field repairs

2.2.8.7 Land Drills and Topics

- a. Equipment fit and function, assembly and disassembly
- b. Gas analysis and labeling
- c. GUE EDGE and pre-dive sequence
- d. Dive team protocols and communication
- e. Underwater drysuit failure management

2.2.8.8 Required Dive Skills and Drills

- a. Demonstrate proficiency in safe diving techniques, including pre-dive preparation, in-water activity, and post-dive assessment.
- b. Demonstrate proficiency with required course equipment and an understanding of the GUE equipment configuration.
- c. Demonstrate the ability to connect and disconnect the drysuit inflation hose.
- d. Demonstrate the ability to manage a drysuit inflation valve that is stuck in the open position.
- 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 the target depth.
- f. Demonstrate safe ascent and descent procedures.
- g. Demonstrate a safe and responsible demeanor throughout all training.
- h. Demonstrate proficiency in underwater communication.

2.2.8.9 Equipment Requirements

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

- a. Drysuit
- b. Drysuit inflation system independent from back gas cylinders (optional)

Excluding:

- a. Backup mask

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 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.