

11. Deep Diver

11.1 Introduction

The purpose of this course is to provide the necessary training to plan and execute dives that are outside the range of depths that are experienced during an SDI Open Water Scuba Diver course, specifically beyond 18 Metres/60 Feet and to a maximum depth of not greater than 40 Metres/130 Feet.

11.2 Who May Teach

An active SDI Instructor that has been certified to teach this specialty.

11.3 Student to Instructor Ratio

Academic:

1. Unlimited, so long as adequate facilities, supplies and time are provided to ensure comprehensive and complete training of subject matter.

Confined Water (swimming pool-like conditions):

1. N/A.

Open Water (ocean, lake, quarry, spring, river, or estuary):

1. A maximum of 4 students per instructor; it is the instructor's discretion to reduce this number as conditions dictate.
2. The instructor has the option of adding 2 more students with the assistance of an active Assistant Instructor or Divemaster.
3. The total number of students an instructor may have in the water is 8 with the assistance of 2 active Assistant Instructors or Divemasters.

11.4 Student Prerequisites

1. SDI Open Water Scuba Diver, SDI Junior Open Water Scuba Diver, or equivalent.
2. Minimum age 18, 10 with parental consent.

11.5 Course Structure and Duration

Open Water Execution:

1. Two dives are required with complete briefs and debriefs by the instructor.
2. The Dive plan must include surface interval, maximum no-decompression time, etc. to be figured out and logged.
3. Divers between the ages of 10 through 14 cannot exceed 21 Metres/70 Feet.

Course Structure:

1. SDI allows instructors to structure courses according to the number of students participating and their skill level.
2. This course may be combined with the SDI Computer Diver Specialty, and only that specific specialty.

11.6 Administrative Requirements

Administrative Tasks:

1. Collect the course fees from all the students.
2. Ensure that the students have the required equipment.
3. Communicate the schedule to the students.
4. Have the students complete the:
 - a. *SDI Liability Release and Express Assumption of Risk Form*
 - b. *SDI Medical Statement Form*.

Upon successful completion of the course the instructor must:

1. Issue the appropriate SDI certification by submitting the *SDI Diver Registration Form* to SDI Headquarters or registering the students online through member's area of the SDI website.

11.7 Training Material

Required Material:

1. *SDI Deeper Diving with Dive Computers* Student Manual and Knowledge Quest (or eLearning course)
2. *SDI Deeper Diving with Dive Computers* Digital Instructor Resource.

11.8 Required Equipment

Basic open water scuba equipment as described in section three of this manual.

11.9 Approved Outline

Instructors may use any additional text or materials that they feel help present these topics.

The following topics must be covered.

1. Diving Tables and Computers:
 - a. History of dive tables and computers:
 - i. No-decompression.
 - ii. Use of the decompression schedule according to your computer.
 - iii. Safety stops.
 - b. Practical problem solving.
2. Equipment:
 - a. Specialty equipment for deep dives:
 - i. Cylinders, different sizes.
 - ii. Regulators.
 - iii. Buoyancy compensator device (BCD).
 - iv. Lift bags.
 - v. Reels.
 - vi. Redundant gas supplies.
 - b. Physics and physiology for deep divers:
 - i. Special considerations for pressures greater than 3 atmospheres (ATA):
 1. Air consumption
 2. Carbon Dioxide (CO₂) factors.
 3. Nitrogen narcosis.
 4. Oxygen (O₂) toxicity.
 5. Decompression sickness.
3. Emergency Procedures for Deep Divers:
 - a. Usage and techniques for safety cylinders.

- b. Recompression chamber listing for area.
- 4. Review of First Aid:
 - a. Oxygen (O₂) treatment.
 - b. Treat for shock.

11.10 Required Skill Performance and Graduation Requirements

Students are required to successfully complete the following:

1. Open Water Dive 1:
 - a. Test and check all equipment, i.e., depth gauges, bottom timers/watches and computers.
 - b. Familiarization with area.
 - c. Descend to planned depth and do not exceed any pre-planned limits.
 - d. Dive according to plan at a depth limited to 30 Metres/100 Feet for the first dive.
 - e. Monitor depth/time/air consumption, figure all times on slate.
 - f. Monitor/test for nitrogen narcosis.
 - g. Ascend to safety stop.
2. Open Water Dive 2:
 - a. Monitor depth/time/air consumption, figure all times on slate.
 - b. Descend to planned depth and do not exceed any pre-planned limits.
 - c. Monitor/test for nitrogen narcosis.
 - d. Execute a simulated emergency that is to be assigned underwater by the instructor.
 - e. Dive according to plan at a depth limited to 40 Metres/130 Feet.
 - f. Ascend to safety stop.