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## 9. Computer Nitrox Diver

### 9.1 Introduction

The SDI Recreational Nitrox course is designed to teach open water divers how to use nitrox mixtures up to 40 percent with the aid of a nitrox programmable dive computer.

### 9.2 Who May Teach

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

### 9.3 Student to Instructor Ratio

#### Academic

1. Unlimited, so long as adequate facility, 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. N/A

### 9.4 Student Prerequisites

1. SDI Open Water Scuba Diver , SDI Junior Open Water Scuba Diver, or equivalent, or current enrollment in one of those courses
2. Minimum age 18, 10 with parental consent

### 9.5 Course Structure and Duration

#### Open Water Execution

1. No dives are required

#### Course Structure

1. SDI allows instructors to structure courses according to the number of students participating and their skill level

### 9.6 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 this specialty 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

## **9.7 Training Material**

**Required Material:**

1. *SDI Easy Nitrox Diving Manual*
2. *SDI Easy Nitrox Diving Instructor Guide*
3. *SDI Easy Nitrox Diving Scuba I.Q. Review*

## **9.8 Required Equipment**

1. Nitrox Cylinder
2. Air cylinder for calibration
3. Oxygen analyzer
4. Sample nitrox log

## **9.9 Approved Outline**

**Instructors may use any additional text or materials that they feel help present these topics. The following topics must be covered during this specialty:**

1. History of Enriched Air Nitrox (EAN)
2. Physiology
  - a. Oxygen (O<sub>2</sub>)
  - b. Nitrogen (N<sub>2</sub>)
3. Equipment Considerations
  - a. Less than 40 percent oxygen content
  - b. More than 40 percent oxygen content
4. Dive Computers
  - a. Mix adjustable
  - b. Oxygen integrated
  - c. Nitrox programmable dive computer
5. Advantages and Disadvantages
  - a. Use of nitrox for physiological advantage with an nitrox programmable dive computer
  - b. Use to extend no-decompression time or shorten surface intervals
  - c. Oxygen toxicity hazards and depth limits
  - d. Discussion of myths and facts regarding enriched air nitrox (EAN) mixtures
6. Equivalent Air Depth (EAD)
  - a. Introduction to the concept only for demonstration



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7. Procedures
    - a. Use and theory of oxygen analyzer
    - b. Gas analysis and logging

## **9.10 Required Skill Performance and Graduation Requirements**

**Students are required to successfully complete the following:**

1. At the completion of the course, the students are required to have 100 percent comprehension of the questions and answers located at the end of every chapter of the *SDI Easy Nitrox Diving* Student Manual
2. Analyze at least of 2 nitrox cylinders
3. Log at least 1 nitrox cylinder
4. Program a nitrox computer to a mix between 22-40 percent oxygen