



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 (O₂)
 - b. Nitrogen (N₂)
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