

## **7. Nitrox Instructor**

### **7.1 Introduction**

This is the entry level certification course for instructors wishing to teach enriched air nitrox (EAN) as a breathing gas. If open water dives are included, the maximum depth is not to exceed the skill level of the instructor. The objectives of this course are to train instructors in the benefits, hazards, and proper procedures for teaching EAN-22 through EAN-40.

### **7.2 Qualifications of Graduates**

Upon successful completion of this course, graduates may:

1. Engage in teaching activities utilizing EAN-22 through EAN-40

Upon successful completion of this course, graduates are qualified to enroll in:

1. TDI Advanced Nitrox Instructor course
2. TDI Decompression Procedures Instructor course

### **7.3 Who May Teach**

This course may be taught by any active TDI Nitrox Instructor Trainer

### **7.4 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. Open water dives are optional, without direct supervision of an instructor trainer

## 7.5 Student Prerequisites

1. Minimum age 18
2. Minimum certification as an SDI Open Water Scuba Diver Instructor or the equivalent
3. Certified as basic nitrox diver, may be combined with instructor program
4. Provide proof of a minimum of 10 logged nitrox dives

## 7.6 Course Structure and Duration

### Open Water Execution

1. Two dives are recommended but are not required

### Course Structure

1. TDI allows instructor trainers to structure courses according to the number of students participating and their skill level

### Duration

1. The suggested number of classroom and briefing hours is 6

## 7.7 Administrative Requirements

### The following are the administrative tasks:

1. Collect the course fees from all the instructor candidates
2. Ensure that the instructor candidates have the required equipment
3. Communicate the training schedule to the instructor candidates
4. Have the instructor candidates:
  - a. Complete the *TDI Liability Release and Express Assumption of Risk form*
  - b. Submit the *TDI Medical Statement* form signed by a licensed physician

### Upon successful completion of the course the instructor trainer must:

1. Issue the appropriate TDI certification by submitting the appropriate *TDI Dive Leader Registration* form to TDI Headquarters

## 7.8 Required Equipment

### The following are required for this course:

1. *TDI Nitrox Instructor Manual*
2. *TDI Standards and Procedures Manual*
3. *TDI EAD Tables*

## 7.9 Required Subject Areas

The current *TDI Standards and Procedures Manual* and the *TDI Nitrox Instructor Guide* are mandatory for use during this course. Instructor trainers may use any additional text or materials that they feel help present these topics. The following topics must be covered during this course:

1. History of EAN
2. Physiology
  - a. Oxygen
  - b. Nitrogen
3. Physics
  - a. Pressure review
  - b. Partial pressures
4. Equipment Requirements
  - a. Less than 40 percent
  - b. More than 40 percent
5. Dive Tables
  - a. Equivalent air depth (EAD)
  - b. Enriched air nitrox (EAN) tables
  - c. Switching mixes on repetitive dives
6. Dive Computers
  - a. Mix adjustable
  - b. Air integrated
7. Advantages and Disadvantages of EAN
  - a. Use as air for physiological advantage w/air tables or computers
  - b. Use to extend no-decompression bottom times or shorten surface intervals
  - c. Oxygen (O<sub>2</sub>) toxicity hazards and depth limits
  - d. Discussion of myths and facts regarding EAN mixtures
8. Procedures
  - a. Use and theory of oxygen analyzer
  - b. Gas analyzing and logging

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

**The following skills must be completed by the Instructor candidate:**

1. Satisfactorily complete the TDI Nitrox written examination and be able to adequately explain each answer to a prospective student
2. Demonstrate proficiency in analyzing oxygen / nitrogen mixtures
3. Demonstrate proficiency in teaching the TDI Nitrox Diver course
4. Demonstrate proficiency in every skill required in the TDI Nitrox Diver course
5. Present at least 1 graded presentation on a nitrox topic