



## **20. TDI – Intro to Tech**

### **20.1 Introduction**

The TDI Intro to Tech course introduces students to the world of technical diving. This course is designed as an introductory course to the TDI Advanced Nitrox course and the TDI Decompression Procedures course. The objective of this course is to familiarize students with technical gear configurations, to enhance open water diving skills (such as buoyancy, trim, and situational awareness), and to introduce students to advanced gas planning techniques within a no-decompression context. This course is strictly a no-decompression course; students are permitted to use Enriched Air Nitrox mixes, provided the gas mix is within their current level of certification.

### **20.2 Qualifications of Graduates**

Upon successful completion of the course, graduates may engage in diving activities in a technical gear configuration without direct supervision so long as:

1. The diving activities approximate those of training.
2. The areas of activities and environmental conditions approximate those of training.

Graduates may enroll in:

1. TDI Advanced Nitrox Course
2. TDI Decompression Procedures Course

### **20.3 Who May Teach**

Who may teach this course?

1. Any active TDI Advanced Nitrox and Decompression Procedures Instructor can apply for the upgrade to teach Intro to Tech.
2. Minimum certification to teach this course is TDI Nitrox Instructor and the equivalent of TDI Advanced Nitrox and Decompression Procedures Instructor with another agency.  
Student – Instructor Ratio

Academic:

1. Unlimited, so long as adequate facility, supplies and time are provided to insure comprehensive and complete training.

Confined Water (Swimming pool-like conditions):

1. N/A

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

1. A maximum of six (6) students per instructor. However, it is the instructor's discretion to further reduce this number as conditions dictate.



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## **20.4 Student Pre-Requisites**

The student must:

1. Be a minimum age of eighteen (18) or fifteen (15) with parental consent.
2. Have a minimum certification of SDI Advanced Diver, Advanced Adventure Diver or equivalent;
3. Show proof of twenty-five (25) logged open water dives.

## **20.5 Course Structure and Duration**

Open Water execution:

1. A minimum of three (3) dives must be conducted; depth shall not exceed 26 meters / 75 feet on any dive.

Course Structure:

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

Duration:

1. The minimum number of classroom and briefing hours is six (6).

## **20.6 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 Liability Release and Medical history forms.
5. The Instructor must review the Liability Release and Medical Forms before starting on the course.

Upon successful completion of the course the Instructor must:

1. Issue a TDI temporary certification card. Complete and submit the Registration Form to TDI.
2. Award card.

## **20.7 Training Material**

Required material;

1. N/A

Optional material;

1. TDI Advanced Nitrox Diving manual.
2. TDI Decompression Procedures.



## **20.8 Required Equipment**

The following equipment is required for this course:

1. Primary cylinder(s) cylinder volume appropriate for diving conditions and diver gas consumption
2. Primary regulators
  - A. Primary and alternate second stage required on all primary cylinder(s)
  - B. Submersible pressure gauges are required on all primary cylinder(s)
3. Depth gauge and automatic bottom timer and/or dive computer
4. Buoyancy compensator appropriate for equipment configuration
5. Ascent reel with lift bag/surface marker buoy
  - A. Appropriate for maximum planned depth
  - B. Lift bag with at least 11 kg / 25 lbs of lift
6. Exposure protection appropriate for local diving condition
7. Slates/wetnotes.

## **20.9 Required Subject Areas**

Instructors may use any materials they feel help in the presentation of the required subject areas. The following topics must be covered during the course:

1. Physics
  - A. Pressure review
2. Physiology
  - A. Ascent/descent rates
  - B. Hyperthermia
  - C. Hypothermia
  - D. Psychological aspects
3. Equipment considerations
  - A. Single/double cylinder(s); valve options
  - B. Regulator options
  - C. Harness/BC options
  - D. Computer, bottom timer, depth gauge options
  - E. Reels/spools options
  - F. Lift bag/surface marker bag options
  - G. Exposure protection options
  - H. Minimum equipment, bring only what you need
  - I. Stream lining and stowing equipment
4. Dive planning
  - A. Tables/computer dive planning and execution
  - B. SAC rate calculations
  - C. Minimum gas reserve calculations for no-decompression dives
  - D. Environmental considerations
5. Procedures
  - A. Entry/exit strategies
  - B. Emergency strategies in case of gas failure/loss



C. Ascent/descent strategies

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

Students are required to successfully complete the following open water skills:

Land drills:

1. Selection and preparation of equipment
2. Conduct team oriented skills (buddy checks) for lift bag deployment
3. Gas matching among buddy teams
4. Demonstrate familiarity with basic hand signals
5. Demonstrate adequate pre-dive planning with limits based on the team and personal gas consumption

Pre-dive drills:

1. Use S.T.A.R.T. before every dive
2. Stress analysis and mitigation

In-water drills:

1. Weight check
2. Demonstrate adequate buoyancy control (ability to hover at fixed position in water column without moving hands or feet)
3. Demonstrate adequate trim (ability to maintain horizontal during the descent, bottom and ascent portion of the dive)
4. Demonstrate no-silting propulsion techniques (frog kick, modified frog kick, modified flutter kick, backwards kick)
5. Demonstrate the ability to perform the following exercises while maintaining trim and buoyancy in the water column:
  - A. Regulator exchange
  - B. Regulator recovery
  - C. Mask partial flood and clear with minimal air loss
  - D. Mask removal and clear with minimal air loss
6. Demonstrate the ability to perform a safety drill (S-drill) while maintaining trim and buoyancy in the water column
7. Demonstrate the ability to perform a valve drill while maintaining trim and buoyancy in the water column (if double cylinders are being used)
8. Demonstrate the ability to deploy a surface marker buoy or lift bag while maintaining trim and buoyancy in the water column
9. Show good situational awareness.

In order to complete this course, students must:

1. Complete all open water requirements safely and efficiently
2. Demonstrate mature, sound judgment concerning dive planning and execution