

TDI – Enhanced Diving Skills Speciality Course

A.1 Introduction

The objective of this course is to:

- 1) Enable the recreational diver, to improve their basic diving skills. This will ensure that they enhance their confidence and competence in the water.
- 2) Ensure that upon completion of the course that a graduate has the necessary ability and attitude to undertake technical dive training.

A.2 Qualifications of graduates

Upon successful completion of this course graduates will have shown that they have superior control in the water and superior knowledge in terms of both diving physiology and diving safety issues.

This course is not a pre-requisite to any TDI technical training courses. However, successful graduates will have shown themselves to be capable divers that are ready for training in technical diving.

A.3 Who may teach

Only TDI Instructors that have this TDI Speciality Instructor Rating may teach this course. This speciality instructor rating can only be received following an instructor training course run by either Matt Reed or Mike Taylor.

A.4 Student Instructor Ratios

Academics

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

In-water

1. A maximum of four students to one instructor. It is at the instructors discretion to reduce this number depending on conditions.

A.5 Student pre-requisites

1. Be a minimum of 15 years of age.
2. Have an open water qualification from any recognised training agency. Nitrox certification is preferred.
3. Show proof of 20 logged open water dives.

A.6 Course structure and duration

Accademics

1. The minimum number of classroom and briefing hours is four.

In Water Training Sessions

1. A total of 150 minutes in water training is required.
2. One confined water session of at least 30 minutes in duration is required. This is in order to:
 - a. Ensure that gear configuration is such that correct trim is easily maintained.
 - b. Ensure that the finning techniques are introduced in a situation which allows immediate verbal feedback.
3. At least one open water training session is required
 - a. This should be the final dive of the course and should be an 'experience' dive in water no deeper than 30meters (Shallower if dictated by student qualifications).

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4. The remaining in water training sessions shallow water skills dives in water that is not deeper than 10 meters. They may be done in either confined or open water environment.
5. The in water training sessions should be videoed in order to provide immediate visual feedback to students.

A.7 Administration

The following administrative tasks are required:

1. Collection of course fees prior to commencing the course.
2. Provision of the required training materials and equipment to the students.
3. Communication of the training schedule to the students.
4. Completion of the Liability Release and Medical Forms by the students.
5. Review of the completed Liability Release and Medical Forms by the instructor.

Upon successful completion of the course the instructor must:

1. Complete the student registration form and send it to TDI HQ for processing and card issue.

A.8 Training Materials

Required material for students

1. TDI: Enhanced Skills Course workbook.

Required materials for instructors

1. TDI: Enhanced Skills Course power point presentation. This is to be provided by Mike Taylor.

A.9 Required Equipment

The following equipment is required for each student:

1. Single tank regulator set up as follows:
 - a. 2m long hose for the primary second stage
 - b. 22-30 inch short hose to the alternative second stage
 - c. Alternative second stage with necklace attachment so that it hangs around divers neck when not in use.
 - d. A submersible pressure gauge, with clip for attachment to D-Ring.
2. A single tank wing
 - a. Not a hybrid wing designed for doubles or singles, as these are sub optimal in both situations.
3. A dive computer.
4. Backplate and harness.
5. Stiff blade fins
 - a. Choice of fins is at the discretion of the instructor
 - i. Scubapro jet fins, Aqualung Rocket fins are preferred.
 - ii. Split fins or any other fins which do not allow adequate propulsion or control in the water are not appropriate for this course.
6. Adequate exposure protection for the open water environment.
7. Cutting device.
8. Properly labelled cylinder
9. Nitrox analyser if required (May be provided by the instructor).
10. Wet Notes
11. One spool with 40 meters of line per diver.
12. Submersible Marker Buoy

The following equipment is optional.

- i. Canister light.

If the course is to be done on doubles, the following equipment is required.

1. Double tank wing.
2. Right post first stage with the following:
 - a. 2m long hose for primary regulator
 - b. BCD inflation hose.
3. Left hand first stage with the following:
 - a. Submersible pressure gauge
 - b. Short hose for alternative regulator

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A.10 Required Subject Areas

The following topics must be covered during the course:

1. Physics
 - a. Pressure review
2. Physiology
 - a. Nitrogen narcosis
 - b. Carbon dioxide toxicity
 - c. Oxygen toxicity
 - i. Basic nitrox calculations
 1. Best mix
 2. Maximum Operating Depth
 3. Equivalent Air Depth
 - ii. Choice of PO₂
 - iii. Whole body toxicity
 - iv. Central Nervous System Toxicity
3. Diving as a team
 - a. Team and situational awareness
 - b. Importance of good communications throughout the dive
 - i. Active
 - ii. Passive
 - c. Signalling
 - i. One handed numbers
 - ii. Other basic signals
4. Planning (Recreational, NDL based diving)
 - a. Deep stops
 - b. Ascent rates
 - c. Turn pressures
 - i. Minimum Gas Requirements and Useable Gas
 1. Open ocean drift
 2. Return to boat
 3. Overhead situations
5. Streamlining and Equipment Configuration
 - a. Backplate
 - b. Wing
 - c. Long Hose
 - d. Jet fins
 - e. Reels and spools
 - f. SMBs
 - g. If the course is done on doubles, the rationale behind what goes on each post should be covered.
6. Gas management
 - a. SAC
 - b. RMV
 - c. Gas Demand
7. Safety issues
 - a. Pre dive
 - i. Most experienced diver leads prep
 - ii. Any diver can call the dive at any time, even pre dive
 - b. During dive
 - i. Least experienced diver leads
 - ii. Comfort zone (Risk analysis “Am I ready for this dive”)
 1. Training
 2. Experience
 3. Knowledge

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4. What ifs
5. Equipment
6. Team ability
7. Fitness

- iii. SPG as confirmation
- iv. Watch buddies during critical tasks
- v. If it seems wrong it is wrong

A.11 Required Skill Performance and Graduation Requirements

General Requirement

1. In order to complete this course the student must:
 - a. Satisfactorily complete the course written exam
 - b. Demonstrate mature attitude and sound judgement concerning dive planning and execution.

Land drills

1. Nitrox skills (Where qualified).
 - a. Correct use of analyser, including optimal procedure for calibration
 - b. Adequate labelling of tanks
 - c. Ability to program nitrox computer

Pre-dive drills

1. Show mastery in the use of START before every dive.
2. Determine turn pressure for each dive based upon the methodology taught in the course.

In water drills

1. Show good team and situational awareness on all dives through:
 - a. Proximity to team members
 - b. Communications with team members
 - c. Response to emergency scenarios
 - d. Data checks
 - e. Observation of team members during all critical tasks
2. Demonstrate mastery of:
 - a. The ability to maintain good body position at all times in terms of trim and streamlining.
 - b. The ability to hover stationary in good trim in a fixed position in the water column, with no moving of hands and feet.
 - c. The ability to hover in good trim in a fixed position in the water column, while performing the following skills:
 - i. Mask removal and replacement
 - ii. Full long hose deployment with transfer to the short hose
 - d. The ability to share air as both donor and recipient
 - e. The ability to share air followed by a slow and controlled ascent to the surface
 - f. The following finning techniques:
 - i. Frog kick
 - ii. Modified flutter
 - iii. Helicopter turns
 - iv. Backward finning
 - v. Optional
 1. modified frog
 2. modified modified flutter
 - g. The ability to deploy a surface marker buoy
 - h. The ability to execute a controlled ascent from depth including:
 - i. Appropriate ascent rate from the bottom to the first deep stop (10m per minute)
 - ii. Deep stops
 - iii. Slow ascent during deep stop to 5m zone (3m per minute)
 - iv. Safety stop at 5m
 - v. Very slow ascent from safety stop to the surface (minimum of 3 minutes to get to the surface)
 - i. The ability to perform basic valve management drills if the course is done on doubles.