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## 4. Advanced Adventure Diver

### 4.1 Introduction

The purpose of this course is to give the diver an overview of 5 different specialties, 2 core, and 3 additional SDI Specialties. The two core specialties are, SDI Deep and Navigation. One dive, from each of the specialties, may apply toward a complete specialty certification. Overhead environments and non-diving specialties are not allowed, and do not count toward the 3 chosen specialties. If computer nitrox is to be used as one of the elected specialties, the instructor must be an SDI Computer Nitrox Instructor.

### 4.2 Who May Teach

Any active SDI Open Water Scuba Diver Instructor

### 4.3 Student to Instructor Ratio

#### Academic

1. Unlimited, so long as adequate facility, supplies and time are provided to ensure comprehensive and complete training of the subject matter

#### Confined Water (swimming pool-like conditions)

1. N/A

#### Open Water (ocean, lake, quarry, spring, river or estuary)

1. A maximum of 8 students per instructor; it is the instructor's discretion to reduce this number as conditions, or chosen specialty dictate (unless chosen specialty dictates a lower ratio i.e. for DPV it is 2:1)
2. The instructor has the option of adding 2 more students with the assistance of an active assistant instructor or divemaster
3. The total number of students an instructor may have in the water is 12 with the assistance of 2 active assistant instructors or divemasters, unless chosen specialty states lower numbers

### 4.4 Student Prerequisites

1. SDI Open Water Scuba Diver, SDI Junior Open Water Scuba Diver, or equivalent; juniors can only take specialties approved for their age
2. Minimum age 18, 10 with parental consent

### 4.5 Course Structure and Duration

#### Open Water Execution

1. Five dives are required with complete briefs and debriefs by the instructor
2. One dive must be deeper than 20 metres / 60 feet but not deeper than 30 metres /100ft **Divers between the ages of 10 and 15 cannot exceed 21metres / 70 feet**
3. One dive must be a navigation dive



4. Dive plans must include surface interval, maximum no-decompression time, etc. to be figured out and logged
5. Each dive will be the first dive of each of the specialties i.e. dive one of deep course, dive one of navigation course, etc
6. All dives are to be under the direct supervision of an active SDI Instructor

### **Course Structure**

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

## **4.6 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.

## **4.7 Training Material**

### **Required Material:**

1. *SDI Advanced Adventure Diver Manual and IQ Review Booklet*
2. *SDI Advanced Adventure Diver Instructor Guide*

### **Optional Materials:**

1. *SDI Advanced Adventure Diver PowerPoint Presentation*

## **4.8 Required Equipment**

Basic open water scuba equipment as described in section three of this manual, and any other equipment that may apply to the chosen specialties

## **4.9 Approved Outline**

The outline that is to be used for this specialty is an abridged version of each of the 2 core and 3 chosen specialties. The material covered must be an overview and introduction. This is just an outline and is not intended to be taught in any particular order.



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## **Deep Diving**

1. Diving Tables and Computers
  - a. History of dive tables and computers
    - i. No-decompression
    - ii. Usage of the decompression schedule according to your computer
    - iii. Safety stops
  - b. Practical problem solving
2. Specialty equipment for deep dives
  - a. Cylinders; different sizes
  - b. Regulators
  - c. Buoyancy compensator device (BCD)
  - d. Redundant gas supplies
3. Physics and physiology for deep divers
  - a. Special considerations for pressures greater than 3 atmospheres (ATA)
    - i. Air consumption
    - ii. Carbon dioxide (CO<sub>2</sub>) factors
    - iii. Nitrogen narcosis
    - iv. Oxygen (O<sub>2</sub>) toxicity
    - v. Decompression sickness
4. Emergency Procedures for Deep Divers
  - a. Usage and techniques for safety cylinders
  - b. Recompression chamber listing for area
5. Review of First Aid
  - a. Oxygen treatment
  - b. Treat for shock

## **Navigation**

1. The Aquatic Environment
  - a. Vision
  - b. Light
  - c. Sound
  - d. Tides
  - e. Currents
  - f. Waves
  - g. Surge
2. Natural Navigation
  - a. Bottom contours
  - b. Depth
  - c. Amount of light
  - d. Surge
  - e. Currents



- f. Underwater objects; rocks, wrecks, etc
- 3. Compass
  - a. Types
    - i. Analog
    - ii. Digital
  - b. Features
    - i. Lubber line
    - ii. Bezel
    - iii. Luminous dial
  - c. Use of compass
    - i. Out and back
    - ii. Squares
    - iii. Triangles
- 4. Estimating Distance Underwater
  - a. Kick cycles
  - b. Time

## 4.10 Required Skill Performance and Graduation Requirements

Students are required to successfully complete the following:

1. Students must perform the skills listed for dive 1 for each of the 2 core, and 3 chosen specialties. Specific course outlines for the respective specialties are listed later in this section of the SDI Standards.

### Deep Dive

1. Open Water Dive 1
  - a. Test and check all equipment, i.e. depth gauges, bottom timers/watches and computers
  - b. Familiarization with area
  - c. Descend to planned depth and do not exceed any pre-planned limits
  - d. Dive according to plan at a depth limited to 30 metres / 100 feet for first dive. **Divers between the ages of 10 and 15 cannot exceed 21metres / 70 feet**
  - e. Ascend to safety stop

### Navigation Dive

1. Open Water Dive 1
  - a. Skills are generally done with more success if practiced on the surface from shore. Using the shore or descent line as a starting /reference point makes keeping track of students easier
  - b. Plan dive
  - c. Enter water from boat or shore
  - d. Practice out and back technique on surface
  - e. Squares and triangles on surface
  - f. Perform square on bottom
  - g. Perform a triangle on the bottom



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h. Ascend and exit