

20. Research Diver

20.1 Introduction

The purpose of this specialty course is to acquaint the open water diver with the fascinating topic of research diving. After the completion of this course, a diver will be better able to discover, explore, and appreciate the underwater environment by using research techniques and better preserve and protect the underwater environment.

20.2 Who May Teach

An active SDI Instructor that has been certified to teach this specialty

20.3 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. A maximum of 8 students per instructor; it is the instructor's discretion to reduce this number as conditions dictate
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

20.4 Student Prerequisites

1. SDI Open Water Scuba Diver or equivalent
2. Minimum age 18, 15 with parental consent

20.5 Course Structure and Duration

Open Water Execution

1. Two dives are required with complete briefs and debriefs by the instructor
2. Dive plan must include surface interval, maximum no-decompression time, etc. to be figured out and logged

Course Structure

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

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:
 - 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

20.7 Required Equipment

1. Basic open water scuba equipment as described in section three of this manual.
2. Slate
3. Measuring device
4. One metre / yard square grid

20.8 Approved Outline

Instructors may use any additional text or materials that they feel help present these topics. The following topics must be covered:

1. The Water Environment, Fresh and Salt Water
 - a. Ecology
 - b. Food chains
 - c. Habitat
 - d. Niche
 - e. Interactions with other forms
 - f. Basic oceanography
 - g. Coral reefs
 - h. Kelp
 - i. Bays and open coast
2. The Marine Animals
 - a. Fishes
 - b. Mollusks
 - c. Invertebrates
 - d. Mammals
 - e. Dangerous animals
3. Diving Methodology
 - a. Collection of data
 - i. Use of compass, underwater slate, measuring techniques, photography for science, accuracy in estimating techniques
 - b. Detailed mapping techniques
 - c. Survey methodology
 - d. Marking and capturing
 - e. Research for sport
4. Conservation

20.9 Required Skill Performance and Graduation Requirements

Choose a location where the students may either use different methods of counting particular species or use mapping techniques to show the locations of different marine life and geographic formations. Students are required to successfully complete the following:

1. Open Water Dive 1
 - a. Plan dive
 - b. Test and check all equipment
 - c. Enter and descend
 - d. Familiarization with the area and ecology
 - e. Marine life identification
 - f. Log dive
2. Open Water Dive 2
 - a. Plan dive
 - b. Enter and descend
 - c. Monitor depth/bottom time
 - d. Compass usage
 - e. Area survey / research techniques
 - f. Recording of data
 - g. Log dive