



1. Recreational Foundation Development

1.1 Introduction

The SDI Recreational Foundation Development course refines student skills in order to advance student diving abilities. The objective of this course is to develop and refine student skills with recreational diving equipment configurations, and to expand on gas planning techniques within a no-decompression context. This course is strictly a no-decompression course; students are permitted to use enriched air nitrox (EAN) mixes, provided the gas mix is within their current level of certification.

1.2 Qualifications of Graduates

Upon successful completion of the course, graduates may engage in diving activities in a recreational equipment configuration without direct supervision provided: 1. The diving activities approximate those of training 2. The areas of activities and environmental conditions approximate those of training

1.3 Who May Teach

1. Any active SDI Recreational Foundation Development Instructor

1.4 Student to Instructor Ratio

Academic

A Maximum of 4 Students per Instructor.

Confined Water (swimming pool-like conditions)

A Maximum of 4 Students per Instructor.

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

A maximum of 4 students per instructor; it is the instructor's discretion to further reduce this number as conditions dictate.



1.5 Student Prerequisites

1. Minimum age 18, 15 with parental consent
2. Minimum certification an SDI Open Water Scuba Diver or equivalent
3. Provide proof of 10 logged open water dives

1.6 Course Structure and Duration

Open Water Execution

1. A minimum of 5 dives must be conducted; All dives must be conducted at depths within the diver's current level of certification but no dives should exceed 12 metres / 40 feet
2. No overhead environments during this training.
3. SDI allows instructors to structure courses according to the number of students participating and their skill level Duration
4. The minimum number of classroom and briefing hours is 6

1.7 Administrative Requirements

Administrative Tasks:

1. 1. Collect the course fees from all the students
2. 2. Ensure that the students have the required equipment
3. 3. Communicate the schedule to the students
4. 4. Have the students complete the:
 - a. a. *SDI Liability Release and Express Assumption of Risk Form*
 - b. b. *SDI Medical Statement Form*

Upon successful completion of the course, 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

1.8 Training Material

Required material

None; instructors may use any additional text or materials that they feel help present these topics



1.9 Required Equipment

The following equipment is required for this course:

1. Primary cylinder(s), cylinder volume appropriate for planned dive and student gas consumption
 - a. Note: Independent and isolated back-mounted doubles, or sidemount cylinders, are allowed to be used.
2. Dive computer
3. Regulator(s)
4. Primary and alternate 2nd stage required on all primary cylinders
5. Submersible pressure gauges or transmitters are required on all primary cylinders
6. Buoyancy compensator device(s) (BCD) adequate for equipment configuration
7. Primary Mask
8. Primary Light
9. Line cutting device
10. Jon-line and other rigging lines as dictated by site conditions
11. Ascent reel with surface marker buoy
 - a. Adequate for maximum planned depth
 - b. Adequate lift and size for the dive environment
12. Exposure suit adequate for the open water environment
13. Slates / wet-notes

1.10 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
 - b. Gas laws review
2. Physiology



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- a. Ascent/descent rates
 - b. Psychological aspects
 - i. Task loading
 - ii. Stress
 - iii. Panic
 - iv. Time management
 - v. Equipment
 - 3. 3. Equipment Considerations
 - a. Cylinders
 - b. Regulator options
 - c. Harness/BCD 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 is needed
 - i. Stream lining and stowing equipment
 - 4. Dive Planning
 - a. Tables/computer dive planning and execution
 - b. Surface air consumption (SAC) rate calculations
 - c. Environmental considerations
 - 5. Procedures
 - a. Entry/exit strategies
 - b. Emergency strategies in case of gas failure/loss
 - c. Ascent/descent strategies

1.11 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)
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 a checklist, developed by the diver and instructor, before every dive and modify as needed
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.)
 - a. Definition for adequate buoyancy control to be used as a graduation requirement for skills throughout the course and as a standard measurement for success:
 - i. Must hold in water position without more than 3 ft variation from depth
 - ii. Hand and feet must be still
3. Demonstrate adequate trim (ability to maintain horizontal during the descent, bottom and ascent portion of the dive).
 - a. Definition for adequate trim to be used as a graduation requirement for skills throughout the course and as a standard measurement for success:
 - i. Must stay flat to horizontal
 - ii. Knees in line with torso
 - iii. Knees bent at 90 Degrees with fins flat to horizontal while hovering.
4. Demonstrate anti-silting propulsion techniques: frog kick, modified frog kick, modified flutter kick (optional: Backwards kick, Helicopter Kick)
5. Demonstrate the ability to perform the following exercises while maintaining trim and buoyancy (as described in points 2 and 3) in the water column:
 - a. Regulator exchange
 - b. Mask partial flood and clear with minimal gas loss
 - c. Mask removal and clear with minimal gas loss
6. Demonstrate the ability to deploy a surface marker buoy or lift bag while maintaining trim and buoyancy in the water column
7. Show good situational awareness



In order to complete this course, students must:

1. Complete all open water requirements safely and comfortably
2. Demonstrate mature judgement and decision-making skills

The five (5) required Open Water Dives may be conducted in any order, but each dive should have a singular focus as outlined below. Dives are encouraged to be repeated as necessary for remediation and competency. Proposed order

1. Kit Perfection Dive: Buoyancy / Trim / Streamlining / Rigging Adjustments
2. Team Communication Dive. A full Briefing in depth lead by the teams, not instructor (can be modeled on previous dives). In water communication emphasis and full awareness of team including light signals. Debrief using a planned format similar to Gareth Lock's DEBRIEF Model
3. Propulsion: Perfect and demonstrate the following kicks: Frog Kick, Modified Frog Kick, Modified Flutter (Optional Helicopter Kick, Back Kick)
4. Emergency Procedures: Buddy out of air, Free flows, Stuck Inflators (Drysuit and BCD), optional but encouraged - Pony Bottle Use for single tank divers.
5. Complete any needed drills and assess refinement of the team and have the team prove their final skills.

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