



Australian Government

SISOSCB001 SCUBA dive in open water to a maximum depth of 18 metres

Release: 1

SISOSCB001 SCUBA dive in open water to a maximum depth of 18 metres

Modification History

Not applicable.

Application

This unit describes the performance outcomes, skills and knowledge required to plan and complete recreational SCUBA dives to a maximum depth of 18 metres and to respond to problematic and emergency situations involving self and dive buddy. It also requires the ability to assemble and disassemble equipment and to complete basic maintenance at the water's edge.

It applies to dive leaders, usually known as divemasters, or instructors and to assistant instructors who use these skills when leading participants in SCUBA diving activities. Leadership skills are provided in complementary units.

This unit applies to any type of organisation that delivers SCUBA diving activities and dive instruction including commercial, not-for-profit and government organisations.

In order to procure air, equipment, and other services to engage in recreational open water diving without supervision, divers must hold certification (C-Card) issued by an industry authorised organisation. That industry certification may or may not be issued concurrently with an Australian Qualification Framework (AQF) qualification or Statement of Attainment identifying achievement of competency in this unit. C-Card certification would be required to gain employment as a divemaster or instructor.

Those delivering training and assessment to support this unit should consult the relevant industry bodies to determine any partnership arrangements for courses, trainers and assessors that can lead to joint AQF and industry regulated C-Card certification.

Pre-requisite Unit

Nil

Competency Field

SCUBA Diving

Unit Sector

Outdoor Recreation

Elements and Performance Criteria

ELEMENTS

PERFORMANCE CRITERIA

Elements describe the essential outcomes

Performance criteria describe the performance needed to demonstrate achievement of the element.

1. Plan dives.

- 1.1. Determine site, depth and duration of dives.
- 1.2. Identify hazards and medical problems and assess risks associated with use of equipment, site, depth and duration of dives.
- 1.3. Prepare dive plans for single and repetitive dives according to industry technical and safety criteria.
- 1.4. Calculate no decompression limits and maximum operating depth.
- 1.5. Use dive computer or dive tables, as required, to plan requirements.

2. Prepare for the dive.

- 2.1. Select and assemble dive equipment suited to conditions and dive requirements, and check for safe working condition.
- 2.2. Utilise dive computers or dive tables, as required, to finalise details of dive, according to industry technical and safety criteria.
- 2.3. Confirm activity safety and emergency response procedures to ensure compliance during activities.
- 2.4. Confirm protocols for communications between divers buddy and activity leaders.
- 2.5. Fit and adjust equipment and exposure suit to self, in conjunction with buddy, to ensure comfort and safety.
- 2.6. Complete buddy cross checks for all equipment.
- 2.7. Participate in pre-dive roll call.

3. Complete dives.

- 3.1. Utilise techniques to enter and exit the water according to conditions and own ability.
- 3.2. Execute controlled descents and ascents with buddy and equalise at appropriate times.
- 3.3. Adjust and maintain positive, neutral and negative buoyancy at appropriate times during dive.
- 3.4. Control underwater swimming and navigate a basic course.
- 3.5. Monitor depth and time throughout dive, according to planned dive tables or use of dive computer data.
- 3.6. Monitor air supply, check pressure gauges regularly and communicate supplies with buddy.
- 3.7. Use techniques that minimise damage to the diving environment throughout all activities.
- 3.8. Participate in post-dive roll call and ensure dive log is completed.

4. Maintain safety and complete rescues.
- 3.9. Disassemble SCUBA gear on completion of dive.
- 4.1. Safely approach, and negotiate obstacles and hazards to minimise risk of injury.
- 4.2. Maintain buddy contact, cooperation and communication throughout dive.
- 4.3. Identify problematic or emergency situations promptly, and assist buddy with rescues.
- 4.4. Self-rescue from problematic or emergency situations.
- 4.5. Use an alternate air source and make controlled air sharing ascents.

Foundation Skills

Foundation skills essential to performance in this unit, but not explicit in the performance criteria are listed here, along with a brief context statement.

SKILLS	DESCRIPTION
Reading skills to:	interpret detailed and familiar organisational safety and emergency response procedures.
Oral communication skills to:	use clear and unambiguous verbal and non-verbal communications to make intent known with diving buddy and support crew.
Numeracy skills to:	interpret and calculate numerical data involving pressures, percentages and depths.
Teamwork skills to:	work in harmony with a buddy diver to plan and complete safe dives.
Planning and organising skills to:	manage own timing to complete activities within planned timeframes.
Self-management skills to:	critically analyse all circumstances and implications to provide a prompt and considered response to rescue requirements.

Unit Mapping Information

No equivalent unit.

Links

Companion Volume Implementation Guides -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=1ca50016-24d2-4161-a044-d3faa200268b>

Assessment Requirements for SISOSCB001 SCUBA dive in open water to a maximum depth of 18 metres

Modification History

Not applicable.

Performance Evidence

Evidence of the ability to complete tasks outlined in elements and performance criteria of this unit in the context of the job role, and:

- plan and complete four open water dives each for different parameters
- prior to each dive, and at the water's edge:
 - assemble own diving equipment
 - inspect all equipment for safety and serviceability
 - fit and adjust equipment to self, including appropriate weights, in conjunction with buddy
 - complete a BWRAF (buoyancy, weights, releases, air, final) check in conjunction with buddy
- during each dive, use effective techniques to control:
 - entry and exit
 - descent and ascent
 - underwater swimming
 - buoyancy both underwater and at the surface
 - mouthpiece clearing for both snorkel and regulator
 - exchanges between regulator and snorkel, in-water at the surface
 - swimming at the surface using snorkel; fully geared
 - buddy contact, cooperation and communication, using correct signals for communication
 - navigation of a basic course with an underwater compass
- across all dives, collectively participate in simulations to respond to problematic and emergency situations and:
 - clear partially and fully flooded masks
 - remove and replace mask underwater
 - remove and replace SCUBA system in-water at the surface
 - remove and replace weight system and SCUBA kit in water too deep in which to stand
 - use an alternate air source to provide air to and receive air from a diver, and make controlled air sharing ascents
 - provide buddy assistance for two situations
- after each dive, disassemble SCUBA gear.

Knowledge Evidence

Demonstrated knowledge required to complete the tasks outlined in elements and performance criteria of this unit:

- organisational safety and emergency response procedures for diving activities
- factors to consider when planning a dive:
 - dive location
 - objectives
 - abilities of self and buddy
 - depth and duration of dive
 - contingencies
- features of diving environments, particularly those relevant to local conditions, sufficient to understand the impacts on diving activities and locations:
 - water conditions:
 - temperature and thermocline
 - visibility
 - movements, currents, waves, tides
 - density of fresh and salt water
 - topography; bottom and shoreline
 - aquatic life; animals and plants
 - weather conditions
 - hazards and techniques used to safely negotiate these:
 - surface hazards
 - overhead obstructions
 - entanglement and entrapment in natural and constructed features
 - special environmental features, including any cultural and heritage features, minimal impact techniques specific to diving environments, and why these are important to conservation
 - any local regulations specific to diving
- how to use dive computers to
 - determine no-decompression limits for single and repetitive dives
 - properly plan and execute a dive
- features, function and operation of dive computers, and advantages of dive computers over dive tables when planning and completing dives
- the physics of diving; the physical principles of matter and their application to diving activities and hazards:
 - sound
 - light
 - buoyancy
 - pressure and gas laws
 - temperature

- for the following medical problems related to diving, the causes, prevention, symptoms, first aid and treatment:
 - direct effects of pressure during descent, types of squeezes and barotrauma:
 - mask
 - suit
 - ears
 - sinuses
 - lungs
 - teeth
 - direct effects of pressure during ascent:
 - gas expansion – ears, sinuses, lungs, stomach, intestines and teeth
 - lung over pressurization and overexpansion injuries
 - vertigo
 - indirect physiological effects of pressure:
 - decompression illness
 - nitrogen narcosis
 - carbon dioxide excess and relationship to overexertion
 - oxygen toxicity
 - shallow water blackout and relationship to hyperventilation
 - issues related to contaminated air
 - other physiological and psychological problems:
 - drowning and secondary drowning
 - carotid sinus reflex
 - inadequate ventilation (hypoventilation)
 - atmospheric issues – hypothermia, hyperthermia, sunburn
 - bite and sting injuries from aquatic animals and plants
 - issues related to use of medication, drugs and alcohol
 - fatigue and exhaustion
 - stress and panic
 - over confidence
- for the following diving equipment, identifying features, functions, operation and, where relevant, how to fit and adjust for comfort and safety:
 - fins
 - face masks
 - snorkels
 - buoyancy control devices
 - exposure suits, booties and gloves of different grades suited to different conditions
 - weight ballast systems
 - cylinders and valves, cylinder support systems
 - regulators

- submersible pressure gauges
- alternative air sources of different types
- timing devices
- depth gauges
- underwater compasses
- floats and flags
- lights
- emergency equipment carried by dive operators:
 - signalling devices, acoustical and visual
 - first aid kits
 - oxygen kits
- for all of the above equipment, how to inspect for safety and serviceability
- the purpose and importance of pre and post-dive roll calls
- inclusions of personal diving log books and the importance of completing after each dive
- communication protocols used between divers, buddies and activity leaders:
 - hand signals
 - noise signals such as rapping on cylinder
 - use of slates
 - use of signalling devices, acoustical and visual
- dive buddy systems and procedures used to:
 - cross check gear
 - maintain contact and cooperation
 - maintain common safety
- techniques used to:
 - enter and exit the water
 - descend and ascend using safety stops
 - swim underwater and at the surface in diving gear
 - maintain buoyancy both underwater and at the surface
 - use an alternate air source to provide air to and receive air from a diver, and make controlled air sharing ascents
 - rescue self and buddy from problematic and emergency situations.

Assessment Conditions

Skills must be demonstrated in an open water site during daylight hours. Dives can be completed from either a boat or from the shore.

During assessment:

- direct vertical access to the surface must be possible; aquatic plants are not considered an overhead obstruction
- the first two of the four required open water dives must include at least 20 minutes at a depth between 5 and 12 metres

- the last two of the four required open water dives must include at least 20 minutes at a depth between 5 to 18 metres
- no more than three dives can be completed in any one day
- the following resources must be available to replicate industry conditions of operation and also for the purpose of assessing the candidate's ability to identify features and operational use:
 - first aid equipment
 - oxygen equipment
 - communication equipment for emergency response
 - diver flags of a type and size that meet local maritime regulator requirements.

Assessment must ensure use of:

- a diving buddy with whom the candidate can dive
- fins
- masks
- snorkels
- cylinders and valves
- buoyancy control devices with low pressure inflators
- regulators with submersible pressure gauges
- alternative air source
- weight ballast systems
- exposure suits suitable for conditions
- timing devices
- depth gauges
- underwater compasses
- signalling devices, acoustical and visual
- dive computers
- organisational safety and emergency response procedures for diving activities.

Assessors must satisfy the Standards for Registered Training Organisations requirements for assessors, and:

- be an individual who is currently certified and sanctioned by an industry authorised organisation to teach and assess open water diving skills and to authorise the issuance of C-Card certification.

Links

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