



Australian Government

Department of Education, Employment and Workplace Relations

SISOSCB301A SCUBA dive in open water to a maximum depth of 18 metres

Release: 2

SISOSCB301A SCUBA dive in open water to a maximum depth of 18 metres

Modification History

Not Applicable

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to plan and perform SCUBA dives in open water to a maximum depth of 18 metres. This unit also focuses on the use and maintenance of SCUBA dive equipment and the performance of SCUBA dive rescues.

Application of the Unit

This unit applies to current or aspiring SCUBA dive guides or instructors working in controlled open water environments to a maximum depth of 18 metres. This may include those working for private dive schools or companies operating at coastal sites or through holiday resorts.

Licensing/Regulatory Information

No licensing, regulatory or certification requirements apply to this unit at the time of endorsement.

Pre-Requisites

Nil

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the Evidence Guide.

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| <p>1. Plan for a SCUBA diving activity.</p> | <p>1.1. Determine <i>factors affecting site selection</i> and ensure selected dive site meets <i>industry technical and safety criteria, relevant legislation and organisational policies and procedures</i>.</p> <p>1.2. Access information on the dive site and identify potential <i>hazards</i> and <i>physics and physiology</i> associated with the dive and implement procedures to minimise <i>risks</i>.</p> <p>1.3. Access <i>relevant sources</i> to interpret detailed <i>weather and environmental information</i> to determine dive <i>plan</i>.</p> <p>1.4. Establish a communication system to use with buddy and other participants while SCUBA diving.</p> |
| <p>2. Select and use SCUBA dive equipment.</p> | <p>2.1. Select <i>SCUBA dive equipment</i> to meet <i>diver's needs and characteristics</i>.</p> <p>2.2. Assess equipment for safety and suitability and adjust and fit to ensure personal comfort.</p> <p>2.3. Use and maintain SCUBA dive equipment according to industry technical and safety criteria, relevant legislation and organisational policies and procedures.</p> <p>2.4. Calculate no-decompression times according to industry technical and safety criteria.</p> <p>2.5. Demonstrate use of buoyancy control device (BCD) to establish positive, negative and neutral buoyancy.</p> |
| <p>3. Perform SCUBA dives to a maximum depth of 18 metres.</p> | <p>3.1. Perform <i>entries to and exits from the water</i> according to industry technical and safety criteria.</p> <p>3.2. Demonstrate <i>SCUBA diving techniques</i> and maintain <i>buddy system</i> at all times.</p> <p>3.3. Give, recognise and respond to hand signals according to industry technical and safety criteria.</p> |
| <p>4. Perform SCUBA</p> | <p>4.1. Apply <i>emergency out of air techniques</i>.</p> |

ELEMENT**PERFORMANCE CRITERIA**

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| dive rescues. | 4.2. Demonstrate <i>self and buddy rescue</i> according to industry technical and safety criteria. |
| 5. Evaluate SCUBA diving activity. | 5.1. Evaluate <i>relevant aspects</i> of the SCUBA diving activity.
5.2. Identify improvements for future SCUBA diving experiences. |

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

- communication skills to inform progress and interact with buddy via underwater hand signals
- teamwork skills to:
 - check, assemble and fit buddy's dive equipment
 - negotiate maximum time and depth limits
 - SCUBA dive with and look out for buddy
- swimming skills to swim 100 metres on the surface wearing SCUBA equipment
- problem-solving skills to:
 - determine time, depth and air supply limits
 - navigate underwater
 - adapt to changing weather and sea conditions
- self and buddy rescue, first aid and emergency response skills appropriate to the site to enable initial response to emergencies and personal health care.

Required knowledge

- legislation, organisational policies and procedures and industry technical and safety criteria to enable safe conduct of all SCUBA diving activities
- minimal impact interactions and techniques to minimise negative impact on aquatic animal and plant life
- selection, use and maintenance of SCUBA equipment, characteristics and technology, the advantages and disadvantages of the range of equipment, and factors affecting appropriate selection of equipment to enable safe performance
- weather and environmental information to interpret forecast conditions and their effect on the diving activity
- sea features such as currents, waves and tides and how these might impact on the dive
- factors affecting buoyancy and how to control sinking and floating
- no-decompression dive tables to determine air requirements
- physics and physiology, such as the direct and indirect effects of pressure and signs, symptoms, prevention and treatment of common SCUBA diving risks such as decompression illness to enable safe performance
- hazards and risks commonly associated with open water SCUBA diving to a depth of 18 metres
- underwater communication systems such as signs and signals used to communicate with buddy and navigation techniques to avoid getting lost under water
- emergency, first aid and rescue procedures appropriate to the location to ensure risk minimisation to self and group.

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the following is essential:

- applies relevant process to select, maintain and fit SCUBA dive equipment and calculates maximum dive time and depth using a no-decompression table
- demonstrates a range of safe SCUBA diving and out of air techniques according to industry technical and safety criteria, relevant legislation and organisational policies and procedures
- negotiates hazards and risks, and minimises negative impact on aquatic animal and plant life throughout dive
- communicates with and monitors buddy's progress throughout the dive and performs self and buddy rescues, including towing in open water
- evaluates and reflects on own SCUBA diving performance to identify strengths, weaknesses and areas that need improvement.

Context of and specific resources for assessment

Assessment must ensure participation in multiple SCUBA diving activities to demonstrate competency and consistency of performance.

Assessment must also ensure access to:

- resources and information to plan and select appropriate equipment for the SCUBA diving activity
- a suitable open water SCUBA dive site
- a buddy to participate in dive process
- a suitable diving boat, if required
- SCUBA, navigation, communication and safety equipment.

Method of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- observation of the planning and review process
- oral or written questioning to assess knowledge of open water SCUBA diving techniques, hazards and risks
- observation of safe participation and communication

with buddy throughout diving process

- written and or verbal self evaluation
- third-party reports from a supervisor detailing performance.

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:

- SISOOPS303A Interpret weather for marine environments.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Factors affecting site selection may include:

- entry and exit points
- bottom conditions
- aquatic life
- environmental conditions

Industry technical and safety criteria may include:

- British Sub-Aqua Club (BSAC)
- Professional Association of Diving Instructors (PADI)
- SCUBA Schools International (SSI).

Relevant legislation may include:

- occupational health and safety
- permits or permission for access
- environmental regulations
- marine regulations.

Organisational policies and procedures may include:

- occupational health and safety
- communication protocols
- code of ethics
- manufacturer's recommendations.

Hazards may include:

- temperature extremes
- slippery or unstable terrain
- dangerous animals and insects
- stinging trees and nettles
- dense vegetation
- group management hazards.

Physics and physiology may include:

- pressure or volume or density relationships
- temperature
- buoyancy
- respiration
- air consumption
- ingassing and offgassing
- decompression sickness
- nitrogen narcosis
- oxygen toxicity
- carbon monoxide toxicity
- hypothermia.

Risks may include:

- hypothermia
- heat exhaustion
- injuries
- exhaustion
- lost party or party member
- equipment failure

Relevant sources may include:

- Bureau of Meteorology
- media
- land managers and agencies
- costal patrol or coastguard
- volunteer rescue
- local knowledge

Weather and environmental information may include:

- satellite images
- daily and weekly forecasts
- maximum and minimum temperatures
- weather warnings
- event warnings
- river levels
- synoptic charts
- high and low tide predictions.

Plan may include:

- objectives
- date, time and duration of dive
- site and equipment
- suitable buddy
- time, depth and air supply limits
- safety and emergency procedures.

SCUBA dive equipment may include:

- fins
- mask
- snorkel
- wetsuit or drysuits
- buoyancy control device (BCD) with low pressure inflator
- compressed air cylinder and valve
- regulator and backpack
- alternate air source
- submersible pressure gauge
- timing device
- depth gauge
- no-decompression tables
- computer
- weight belt and weights
- diver's tools

- communication equipment
 - navigation equipment.
- Diver's needs and characteristics*** may include:
- age
 - cultural and situational factors
 - previous experience and knowledge
 - physical development
 - diver's build, weight and lung capacity.
- Entries to and exits from water*** may include:
- off-shore
 - off dive boats.
- SCUBA diving techniques*** may include:
- entries to and exits from the water
 - equipment recovery and replacement in water
 - buddy system
 - buoyancy control
 - underwater navigation
 - use of a regulator
 - descending and ascending
 - equalising pressure
 - self and buddy rescues
 - bearings or reciprocal bearings
 - dive calculations
 - air supply monitoring
 - open water diving at depths between 5 and 18 metres for a period of at least 20 minutes
 - safety stops at 5 metres for 3 - 5 minutes
 - slowly ascending at a rate that does not exceed 18 metres per minute.
- Buddy system*** may include:
- selecting equipment
 - checking buddy's equipment before a dive
 - checking depth, time and air supply limits
 - providing emergency assistance.
- Emergency out of air techniques*** may include:
- alternative air source assisted ascent
 - controlled emergency swimming ascent
 - tired diver assist
 - sharing air
 - unconscious diver rescue.
- Self and buddy rescue*** may include:
- buddy secured and towed 15 metres
- Relevant aspects*** may include:
- objectives
 - planning process
 - activity site
 - weather

- equipment selection
- clothing selection
- food selection
- instructional content
- instructional technique
- assessment technique
- group feedback
- directing techniques
- rescue techniques employed.

Unit Sector(s)

Outdoor Recreation

Competency Field

SCUBA