

**CEN TC 329**

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## **Recreational Diving Services — Safety related minimum requirements for the training of scuba instructors — Part 1: Level 1**

*Dienstleistungen des Freizeittauchens — Sicherheitsrelevante Mindestanforderungen an die Ausbildung von Tauchausbildnern — Teil 1: Ausbildungsstufe 1*

## Foreword

This document has been prepared by CEN /TC 329, "Tourism Services".  
This document is currently submitted to the CEN Enquiry.

## Introduction

The European Standards relating to recreational diving services, have been prepared by CEN/TC 329/WG 3 "Recreational Diving Services", with the aim of establishing safe practices in the provision of services.

Therefore these standards define:

- necessary levels of experience and competency of divers and instructors,
- safe practices and requirements for recreational scuba diving service providers appropriate to the different diving levels.

In any case, they cannot substitute for nor impose upon legal requirements, the alteration of which is outside the competence of the CEN/CENELEC members.

The European Standard prEN 329.03.02 consists of the following parts:

- prEN 329.03.02-1, *Recreational Diving Services - Safety related minimum requirements for the training of scuba instructors - Part 1: Level 1*
- prEN 329.03.02-2, *Recreational Diving Services - Safety related minimum requirements for the training of scuba instructors - Part 2: Level 2.*

The above mentioned European Standards represent a tool for comparison of existing (or future) qualifications of scuba instructors. In no way do they represent a course programme nor do they imply that course programs and scuba instructor certifications issued by different nations or organisations must necessarily correspond to these levels.

## 1 Scope

This European Standard specifies minimum qualification requirements for recreational scuba diving instructors at level 1.

This European Standard applies only to contractual training and certification in recreational scuba diving.

## 2 Normative references

This European Standard incorporates, by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

prEN 14153-1, *Recreational diving services - Safety related minimum requirements for the training of recreational scuba divers - Part 1: Level 1 – "Supervised Diver"*

prEN 14153-2, *Recreational diving services - Safety related minimum requirements for the training of recreational scuba divers - Part 2: Level 2 – "Autonomous Diver"*

prEN 14153-3, *Recreational diving services - Safety related minimum requirements for the training of recreational scuba divers - Part 3: Level 3 – "Dive Leader"*

prEN 329.03.02-2, *Recreational diving services – Safety related minimum requirements for the training of scuba instructors – Part 2: Level 2*

### 3 Terms and definitions

For the purposes of this European Standard, the following terms and definitions apply:

#### 3.1

##### **training organisation**

entity providing recreational scuba diving training systems and certification

#### 3.2

##### **confined water**

swimming pool with a depth appropriate to the activity or body of water that offers similar conditions

#### 3.3

##### **open water**

body of water significantly larger than a swimming pool offering conditions typical of a natural body of water encountered in the region

### 4 Competencies of a scuba instructor at level 1

A level 1 scuba instructor shall be qualified

— to teach and assess students up to level 1 scuba diver on their theoretical knowledge,

— to teach and assess students up to level 1 scuba diver in confined water.

If supervised and authorised by a scuba instructor level 2, a level 1 scuba instructor may:

— gain progressive experience in teaching and assessing the theoretical knowledge of scuba diver levels 1 to 3,

— teach any level of scuba diver in confined water,

— gain progressive experience in teaching and assessing open water surface skills.

If supervised and directly observed by a scuba instructor level 2, a level 1 scuba instructor may gain progressive experience in teaching and evaluating in confined and open water.

### 5 Prerequisites and practical experience

Scuba instructor candidates shall be at least scuba diver level 3 – “Dive Leader” with practical experience gained after level 3 certification according to prEN 14153-3 before any assessment of their competency as scuba instructor level 1 occurs.

### 6 Scuba instructor candidate information

The following information shall be made available to scuba instructor candidates prior to enrolling on the course:

— prerequisites according to 5,

— limitations of eventual qualification,

— scope of course,

— course procedures,

— costs, insurance and contractual issues according to national regulations,

— equipment requirements,

- certification requirements according to 12,
- diving related legislation and legal requirements,
- local environmental considerations.

Scuba instructor candidates shall be informed that records will be kept of their personal data and these records may be passed on to a training organisation.

## **7 Theoretical knowledge**

Scuba instructor candidates shall have extensive theoretical knowledge associated with the scuba skills according to prEN 14153-1 to 3 and the capabilities concerning lecture presentations referenced under 10.

Additionally scuba instructor candidates shall have appropriate knowledge of the following issues:

- medical and psychological contraindications for scuba diving,
- training standards for scuba diver level 1 according to prEN 14153-1, level 2 according to prEN 14153-2 and level 3 according to prEN 14153-3,
- the duty of care of a scuba instructor,
- safety regulations affecting scuba diving service provision (e.g. schools, centres, clubs, organisations),
- methods of safely filling diving cylinders including relevant local regulations concerning cylinder working pressures and testing requirements,
- relationships and communication with relevant public authorities (e.g. police, customs, rescue organisations, fire-brigade),
- teaching principles and methodology,
- selection of confined water dive sites.

## **8 Personal scuba skills**

Scuba instructor candidates shall be able to perform all of the personal scuba skills from level 1 to level 3 scuba diver according to prEN 14153-1, prEN 14153-2 and prEN 14153-3 to demonstration quality.

## **9 Lecture Presentations**

Scuba instructor candidates shall be able to conduct lesson preparation, planning and delivery of lecture teaching presentations of topics from prEN 14153-1 to 3, clause 7.

## **10 Teaching and supervision of scuba skills**

Scuba instructor candidates shall be able to conduct confined water lessons for scuba divers level 1 to level 3 from the topics outlined in prEN 14153-1 to 3, clause 8.

Lesson elements to be assessed shall include

- preparation,
- planning,

- briefing and debriefing,
- group control and supervision,
- skill demonstration,
- problem recognition and solving
- student evaluation.

## **11 Emergency procedures**

### **11.1 Diver Rescue**

Scuba instructor candidates shall complete training in diver rescue skills.

Rescue skills shall include:

- recognition of emergency situations (e.g. loss of breathing gas supply, lack of response),
- controlled casualty recovery from depth,
- effective emergency surface actions,
- casualty recovery from the water,
- emergency situation management including co-ordination with emergency services in accordance with local emergency procedures.

### **11.2 First Aid**

Scuba instructor candidates shall have completed a course/courses in First-Aid and Cardio Pulmonary Resuscitation and have a valid qualification or certificate.

### **11.3 Oxygen Administration**

Scuba instructor candidates shall complete training in emergency administration of oxygen. This training shall include theoretical instruction of the medical principles involved and practical tuition on the use of an emergency oxygen unit.

## **12 Certification requirements**

### **12.1 Scuba instructor-trainer**

Scuba instructor-trainers shall be scuba instructors of senior standing and higher qualification than a level 2 scuba instructor and shall have received specific training in the education and development of scuba instructors.

Scuba instructor-trainers shall have an extensive knowledge of pedagogy and relevant educational systems and shall be qualified and sanctioned by a training organisation or competent public authority as being able to teach and evaluate scuba instructors. Scuba instructor-trainers may take the role of trainers or examiners of scuba instructor candidates according to the procedures defined by such training organisations or competent public authorities.

### **12.2 Health requirements**

Scuba instructor candidates shall be medically screened as suitable for diving according to procedures laid down by a competent medical authority. If such procedures are not specified scuba instructor candidates shall

provide evidence of a diver medical examination not older than one year unless the medical doctor who has carried out the examination specifies longer validity.

### **12.3 Minimum age**

The minimum age for receiving the certification as level 1 scuba instructor is 18.

### **12.4 Minimum practical experience**

Scuba instructor candidates shall have gained teaching experience by assisting in a structured series of actual or simulated training sessions (both classroom and confined water) which simulate the duties that they will be expected to fulfil once qualified. Such training sessions shall be supervised by a scuba instructor of at least level 2.

Any assessments during such sessions shall be conducted by a scuba instructor-trainer.

Scuba instructor candidates shall have gained sufficient diving experience to demonstrate competency in all of the abilities prescribed by this standard.

### **12.5 Theoretical knowledge**

Scuba instructor candidates shall satisfactorily demonstrate to a scuba instructor-trainer knowledge of scuba diving training by taking and passing an examination. This examination shall test theoretical knowledge according to 7 and knowledge of skills according to 8, 9, 10 and 11.

### **12.6 Teaching techniques**

Scuba instructor candidates shall satisfactorily demonstrate to a scuba instructor-trainer their ability to prepare and present theoretical and practical presentations that are technically correct, of an appropriate content and are delivered in an effective manner suited to the students' needs.

An example for the assessment of teaching techniques is given in annex A.

### **12.7 Teaching and supervision of scuba skills**

Scuba instructor candidates shall satisfactorily demonstrate to a scuba instructor-trainer the ability to perform, teach and evaluate confined water skills according to prEN 14153-1. Scuba instructor candidates shall not be given information prior to the assessment on the precise exercise to be used.

An example for the assessment of teaching techniques is given in annex A.

### **12.8 Supervision and guidance of diving activities**

Scuba instructor candidates shall demonstrate to a scuba instructor-trainer skills in group control and supervision of students' diving activities in confined water.

### **12.9 Emergency procedures**

Scuba instructor candidates shall demonstrate to a scuba instructor-trainer diver rescue skills according to 11 by completing at least one simulated open water rescue.

**Annex A**  
(informative)  
**Teaching and Evaluation Competencies when Teaching a Level 1 Scuba Diver Course**

Theory lesson	Scuba Instructor candidate evaluation areas	Criteria testing
Equipment: Regulators	<ol style="list-style-type: none"> <li>1) Candidate introduced themselves and the topic and explained the importance/value of subject</li> <li>2) Candidate defined learning objectives (what students should know by end of lesson)</li> <li>3) Candidate outlined content of lesson and how students should participate</li> <li>4) Lesson content (as per prEN 14153-3, annex A) - the candidate should:               <ol style="list-style-type: none"> <li>a) Explain the purpose of a regulator</li> <li>b) Describe the major components and accessories of a scuba regulator system and their purpose</li> <li>c) Explain how a scuba system is assembled</li> <li>d) Explain how to read a submersible pressure gauge</li> <li>e) Explain post-dive regulator care considerations</li> </ol> </li> <li>5) Information was presented in a logical sequence</li> <li>6) Candidate showed the relationship of information to other knowledge students already possess</li> <li>7) Candidate summarised information as key points, reinforced the value of the information and explained when it would be applied by students</li> <li>8) Candidate used appropriate training aids</li> <li>9) Candidate presented the information in a clear manner and involved students by asking questions</li> <li>10) Candidate adapted teaching method according to students' input and needs</li> <li>11) Candidate tested students' understanding of the information</li> </ol>	Observation of simulated or actual lessons by an scuba instructor-trainer
<p><b>NOTE</b> The above given example can be applied to any theory presentation with the exception of point 4 which will vary according to the content of the lesson.</p>		

Practical lesson	Scuba Instructor candidate evaluation areas	Criteria testing
Dive planning and preparation	<ol style="list-style-type: none"> <li>1) Candidate introduced themselves and the topic and explained the importance/value of subject</li> <li>2) Candidate defined learning objectives (what students should be able to do by end of lesson)</li> <li>3) Candidate explained how the practical session will be conducted and described the students' roles in the lesson</li> <li>4) Candidate described how communications will be made during the session</li> <li>5) Candidate described relevant emergency procedures</li> <li>6) Candidate demonstrated or explained as appropriate:               <ol style="list-style-type: none"> <li>a) how to establish entry/exit points</li> <li>b) how to choose a course to follow</li> <li>c) to agree on maximum time and depth limits</li> <li>d) to review communications</li> <li>e) to agree upon returning air pressure</li> <li>f) how to stay together</li> <li>g) what to do if contact with buddy or the class is lost</li> <li>h) emergency procedures, including air sharing procedures</li> <li>i) how to define an objective for the dive</li> </ol> </li> <li>7) Candidate observed students demonstrate items 6 a – i</li> <li>8) Candidate responded to student problems appropriately and corrected students as necessary</li> <li>9) Candidate ensured that students were properly supervised and monitored during the session</li> <li>10) Candidate presented a debrief following the session which included feedback to students regarding their performance compared to the learning objectives, an analysis of problems that occurred and solutions to such problems and reinforced the value and application of the topic</li> </ol>	Observation of simulated or actual lessons by a scuba instructor trainer
<p><b>NOTE</b> The above given example can be applied to any practical presentation with the exception of point 6 which will vary according to the content of the presentation.</p>		

## **Example of scuba Instructor Level 1 Knowledge**

### **Topic: Diving Physics**

#### **Subtopic: Light, Heat and Sound in Water**

The scuba instructor candidate shall be able to answer the following questions. The scuba instructor candidate shall also have an understanding of why each of these phenomena occur and the diving related consequences:

- 1) Why does water dissipate body heat faster than air does?
- 2) What effect does water's ability to dissipate heat have on a diver?
- 3) What does light do when it passes from air into water, or vice-versa, and how does this affect a diver?
- 4) What is refraction?
- 5) How does the speed of sound in water affect hearing?