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English version

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

Services relatifs à la plongée de loisirs - Exigences
minimales liées à la formation des moniteurs de plongée
subaquatique - Partie 1: Niveau 1

Dienstleistungen des Freizeittauchens -
Sicherheitsrelevante Mindestanforderungen an die
Ausbildung von Tauchausbildern –
Teil 1: Ausbildungsstufe 1

This European Standard was approved by CEN on 10 December 2003.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

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Foreword

This document (EN 14413-1:2004) has been prepared by Technical Committee CEN /TC 329, "Tourism Services", the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by August 2004, and conflicting national standards shall be withdrawn at the latest by August 2004.

Annexes A and B are informative.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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 a series of specifications for safety practices and the provision of services.

Therefore these standards specify:

- necessary levels of experience and competency of scuba divers and scuba instructors,
- safety 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 EN 14413 consists of the following parts:

- EN 14413-1, *Recreational Diving Services - Safety related minimum requirements for the training of scuba instructors - Part 1: Level 1*
- EN 14413-2, *Recreational Diving Services - Safety related minimum requirements for the training of scuba instructors - Part 2: Level 2.*

The requirements specified are minima; they do not preclude the provision of additional training or the assessment by a training organization of additional competencies. 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 the competencies that a scuba instructor ought to achieve in order for a training organization to award the scuba instructor certification indicating that he has met or exceeded scuba instructor level 1 and specifies assessment of these competencies.

It also specifies conditions under which training ought to be provided, in addition to the general requirements for recreational diving service provision in accordance with EN 14467.

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 (including amendments).

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

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

EN 14153-3:2003, *Recreational diving services - Safety related minimum requirements for the training of recreational scuba divers - Part 3: Level 3 – Dive Leader*

EN 14467, *Recreational diving services – Requirements for recreational scuba diving service providers*

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, and which is responsible for the implementation and quality management of scuba diver training

NOTE Entity may include scuba diving federations and scuba diver training agencies.

3.2

certification

confirmation that a student has completed scuba diver training which fulfils all requirements in accordance with this European Standard, as issued by training organizations

3.3

confined water

swimming pool with a depth appropriate to the activity or body of water that offers similar conditions with regard to visibility, depth, water movement and access

3.4

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 trained such that when assessed in accordance with clause 13 they are deemed to be qualified to:

- teach and assess students up to level 1 in accordance with EN 14153-1 on their theoretical knowledge,
- teach and assess students up to level 1 in accordance with EN 14153-1 in confined water,
- if supervised and authorised by a scuba instructor level 2:
 - gain progressive experience in teaching and assessing the theoretical knowledge of scuba diver levels 2 to 3 in accordance with EN 14153-2 and EN 14153-3 respectively,
 - 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:
 - gain progressive experience in teaching and evaluating in confined and open water.

5 Prerequisites

5.1 Practical experience

The scuba instructor trainer shall ensure that scuba instructor candidates have certification to at least scuba diver level 3 – “Dive Leader” with additional practical experience gained after level 3 certification in accordance with EN 14153-3 prior to their assessment in accordance with clause 13.

5.2 Health requirements

Scuba instructor candidates shall be medically screened as suitable for diving in accordance with 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.

6 Scuba instructor candidate information

Information in accordance with EN 14467 shall be made available to the students prior to, or during the first class meeting.

7 Required theoretical knowledge

Scuba instructor candidates shall have extensive theoretical knowledge regarding the scuba skills specified in EN 14153-1, EN 14153-2 and EN 14153-3 and sufficient knowledge to be able to give presentations on topics from EN 14153-1, EN 14153-2 and EN 14153-3:2003, clause 7.

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

- medical and psychological contraindications for scuba diving,
- the training requirements for scuba diver level 1 in accordance with EN 14153-1, level 2 in accordance with EN 14153-2 and level 3 in accordance with EN 14153-3,

- the duty of care of a scuba instructor,
- safety regulations affecting scuba diving service provision (e.g. regulations affecting 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 of a level 1, level 2 and level 3 scuba diver in accordance with EN 14153-1, EN 14153-2 and EN 14153-3, respectively, to demonstration quality.

9 Theoretical teaching skills

Scuba instructor candidates shall be able to conduct lesson preparation, planning and delivery of theoretical teaching presentations.

10 Teaching and supervision of scuba skills

Scuba instructor candidates shall be able to conduct confined water lessons for students at level 1, level 2 and level 3 from the topics outlined in EN 14153-1, EN 14153-2 and EN 14153-3, respectively.

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 be competent in diver rescue skills including:

- 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 be competent in First-Aid and Cardio Pulmonary Resuscitation.

11.3 Oxygen Administration

Scuba instructor candidates shall be competent in the emergency administration of oxygen. This shall include knowledge of the medical principles involved and practical use of an emergency oxygen unit.

12 Scuba instructor-trainers

Scuba instructor-trainers shall be responsible for instructor training and certification.

Scuba instructor-trainers shall be scuba instructors of senior standing and of 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 in accordance with the procedures defined by such training organisations or competent public authorities.

13 Certification

13.1 Minimum age

The minimum age for receiving certification as a level 1 scuba instructor shall be 18 years.

13.2 Minimum practical experience

Scuba instructor candidates shall have gained teaching experience by playing the role of an instructor in a structured series of actual or simulated training sessions (both in the classroom and in confined water) which simulate the duties that they will be expected to fulfil once qualified. Such training sessions shall be directly 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 specified in this standard.

13.3 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 in accordance with clause 7 and knowledge of skills in accordance with clauses 8, 9, 10 and 11.

13.4 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.

13.5 Teaching and supervision of scuba skills

Scuba instructor candidates shall satisfactorily demonstrate to a scuba instructor-trainer their ability to perform, teach and evaluate confined water scuba skills in accordance with EN 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 and supervision of scuba skills is given in annex A.

13.6 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.

13.7 Emergency procedures

The scuba instructor-trainer shall ensure that scuba instructor candidates are competent in diver rescue skills specified in clause 11 by either:

- the scuba instructor candidate demonstrating skills selected from clause 11 by completing at least one simulated open water rescue or
- the scuba instructor-trainer ensuring that the scuba instructor candidate has current documented proof of competency in such rescue techniques issued within the last 12 months.

Annex A (informative)

Example of assessment of teaching and Evaluation Competencies when Teaching a Level 1 Scuba Diver Course

Theory lesson	Scuba instructor candidate evaluation areas	Method of assessment
Equipment: Regulators	<ol style="list-style-type: none"> 1) Candidate introduced themselves and the topic and explained the importance/value of subject 2) Candidate defined learning objectives (what students should know by end of lesson) 3) Candidate outlined content of lesson and how students should participate 4) Lesson content (as per EN 14153-3:2003, annex A) - the candidate should: <ol style="list-style-type: none"> a) Explain the purpose of a regulator b) Describe the major components and accessories of a scuba regulator system and their purpose c) Explain how a scuba system is assembled d) Explain how to read a submersible pressure gauge e) Explain post-dive regulator care considerations 5) Information was presented in a logical sequence 6) Candidate showed the relationship of information to other knowledge students already possess 7) Candidate summarised information as key points, reinforced the value of the information and explained when it would be applied by students 8) Candidate used appropriate training aids 9) Candidate presented the information in a clear manner and involved students by asking questions 10) Candidate adapted teaching method in accordance with students' input and needs 11) Candidate tested students' understanding of the information 	Observation of simulated or actual lessons by a scuba instructor-trainer
<p>NOTE The above given example can be applied to any theory presentation with the exception of point 4 which will vary in accordance with the content of the lesson.</p>		

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

Annex B (informative)

A–deviations

A- deviation: National deviation due to regulations, the alteration of which is for the time being outside the competence of the CEN/ CENELEC member.

This European Standard does not fall under any Directive of the EU. In the relevant CEN/ CENELEC countries these A- deviations are valid instead of the provisions of the European Standard until they have been removed.

Clause	Deviation
1	<p>France Decree N 2002-1269 of October 18, 2002 passed for the application of article 43 of the amended law N 84-610 of July 16, 1984 relative to the organisation and promotion of physical and sports activities</p> <p>It is pointed out that the activity of a scuba instructor is regulated by the above decree and is thus subject to endorsement by the relevant authorities in France.</p> <p>Moreover, this French decree is strengthened by its recognition at European level for the scuba instructors: a permanent European derogation was granted to France by a Commission Decision (MARKT/D4/8339/2000-EN) dated 2000-07-25.</p>
13.1	<p>Portugal (Alínea a) do Art.º 13º do DL 48365 de 2 de Maio de 1968).</p> <p>To be able to be certified as diving instructor, candidates should have a minimum age of 21 years old.</p>

Bibliography

EN 14413-2, *Recreational diving services – Safety related minimum requirements for the training of scuba instructors – Part 2: Level 2*