# Rescue

# **Speciality Course**

Part I Standards & Requirements

**Part II** Training Program



# Part I (Standards & Requirements)

# **Table of Contents**

PART ISTANDARDS & REQUIREMENTS1		
PAR	T I (STANDARDS & REQUIREMENTS)2	
Table	e of Contents2	
Ι	Course Classification (Type & Level)4	
II	Aims & Objectives of Courses4	
III Res Res	Entry Requirements	
IV	Maximum Student/Instructor Ratio5	
V Cou Ass	Instructor and Assistants Requirements	
VI	Special Course Requirements7	
VII Res Res	Students performance objectives	
VIII	Minimum Course Duration9	
IX	Quality Control / Assurance9	
X	Overview of Complete Training System9	
PAR	T II (TRAINING PROGRAM) 10	
I Res Res	Course Schedule       11         scue Diver       11         scue Snorkel Diver       12	
II Mi Res T D	nimum Course Content (syllabus)13scue Diver13heoretical Lessons13Ory Part13	

Wet Part	15
Practical Lessons	16
Dry Part	
Wet Part	17
End of course	
Rescue Snorkel Diver	19
Theoretical Lessons	19
Dry Part	19
Wet Part	
Practical Lessons	
Dry Part	
Wet Part	
End of course	24
III Knowledge review and Skills Assessment	24
Theoretical knowledge:	
Practical skills:	24
IV Issuing of Recognition Material	24

# I Course Classification (Type & Level)

The Rescue Diver course can be attended on different levels. That means that the required entry certificate is CMAS Two Star Snorkel Diver and above, or equivalent.

The course can be attended on two different levels:

Rescue Diver Rescue Snorkel diver

The certificate has no expiry date.

The training period to a CMAS Rescue Speciality Course must not exceed 1 year.

# II Aims & Objectives of Courses

- To rise the overall safety within sports diving
- To make the diver able to prepare and implement a useful emergency plan
- To make the diver competent within 1<sup>st</sup> aid related to diving
- To make the diver competent within under water search planning and implementation with regard to emergency situations.
- The course shall be seen as yet another contribution to the safety in diving.

The subjects covered in the two courses are the same, but the levels are different.

#### Part 1: Theory:

- 1<sup>st</sup> aid in relation to diving
- Emergency procedures in relation to diving
- Further treatment of the casualty

#### Practise:

- $1^{st}$  aid
- Resuscitation of unconscious diver
- Stabilising the patient
- Transport of the patient

#### Part 2: Theory:

- Searching under water
- Recovery and surface tow of victim
- Emergency procedures in relation to diving
- Cases

Practise:

- Searching under water
- Recovery and surface tow of victim
- Emergency procedures in relation to diving
- Incidents.

# III Entry Requirements

# **Rescue Diver**

- 1. Student's minimum age:
- 2. Certification level:
- 3. Minimum number and type of dive:
- 4. Other:

#### **Rescue Snorkel Diver**

- 1. Student's minimum age:
- 2. Certification level:
- 3. Minimum number and type of dive:
- 4. Other:

# 16 years CMAS Two Star Diver or equivalent 50 (at least 5 of these performed within 12 weeks prior to the course). Medical approval for diving not older than 1 year.

16 years	
CMAS Two Star Snorkel Diver or equivale	nt
50 (at least 5 of these performed within 12	
weeks prior to the course).	
Medical approval for diving not older than	1
year.	

# IV Maximum Student/Instructor Ratio

1.	Theoretical part	4:1
2.	Open water part	2:1

# V Instructor and Assistants Requirements

# **Course Director**

a) Certificate level:

Rescue Diver:

CMAS Two Star Instructor having passed the Rescue Speciality Course.

Rescue Snorkel Diver:	CMAS Two Star Instructor or CMAS Two Star Snorkel Diver Instructor having passed the Rescue Speciality Course.
b) Proof of experience:	The instructor must be in active teaching status as required by his national federation.
	The instructor must be of proven ability and practical experience.
	The instructor must have a medical certificate not older than 1 year.
	The instructor must have assisted another instructor on at least one course before conducting their own course.
	The instructor must have submitted his own course outline which has been approved by the national federation's technical committee, or (s)he must use a standard outline proposed by the federation itself.
	The instructor must have approved and valid training in medical 1 <sup>st</sup> aid and accident management by a recognised training organisation.
Assistants	
a) Generally:	As required to the satisfaction to the course director.
	Must have a medical approval for diving not older than 1 year.
b) Certificate level:	
Rescue Diver:	CMAS Two Star Diver having passed CMAS Rescue Speciality Course on diver level, and professionals within diving medicine, treatment of diving incidents and rescue procedures connected to diving accidents.
Rescue Snorkel Diver:	CMAS Two Star Diver or CMAS Two Star Snorkel Diver having passed CMAS Rescue Speciality Course snorkel diver level, and professionals within diving medicine, treatment of diving incidents and rescue procedures connected to diving accidents.
c) Proof of experience:	The assistant must have attended at least once the actual course as an inactive "observer" (without any tasks and responsibilities) to become familiar with the relevant procedures.
	The assistant must have logged at least 80 dives overall.

The assistant must successfully have attended a Dive Supervisor Speciality course or equivalent.

The assistant must have approved and valid training in medical 1<sup>st</sup> aid and accident management by a recognised training organisation.

# VI Special Course Requirements

1. Course approval:	Approval by national (or regional) committee (or by the national/regional training manager) required for the first type of this course by this instructor.		
2. Facilities:	a) Classroom:	A classroom with chairs and tables for everyone, and enough free space on the floor for practical exercises. Standard Audio-visual aids must be present.	
	b) Confined open water:	4-6 meters with firm bottom for the snorkel diver level.	
	c) Open water:	20 meters for rescue diver level.	
3. Diving equipment:	<ul> <li>Rescue diver</li> <li>Diving flag.</li> <li>Adequate thermal protection.</li> <li>Normal scuba diving equipment including pressure gauge an buoyancy device with power inflation or equivalent.</li> <li>Instructors and assistants must in open water be equipped wi alternative air source (two complete independent regulators, system can be accepted in tropical waters).</li> </ul>		
	<ul><li>Rescue snorkel diver</li><li>Diving flag.</li><li>Adequate thermal prot</li><li>Normal snorkel diving</li></ul>	ection. equipment including inflatable life west.	
4. Other equipment:	<ul> <li>Buoys, lines and markers.</li> <li>Inflatable or other small boat</li> <li>Emergency medical kit with oxygen.</li> <li>Communications nearby.</li> </ul>		

- Resuscitation doll
- Standard 1<sup>st</sup> aid kit
- Materials for stabilising and transport of victim
- Audio-visual aids for the training
- 5. Other restrictions: Drift dives are prohibited during training.

- Minimum duration of one dive is 20 minutes.
- Depth limits according to certificate level of each participant (as a maximum under best conditions) and according to local circumstances; however 20 meter should never be exceeded during this courses.
- Wreck or cave diving shall be in a well known stable structure.
- Ice diving shall be under firm ice.
- Dive duration must be planned so as not to reach the reserve (normally 40-50 bar).
- All diving is made within the non-decompression limits of officially used tables or dive computers, adequate for the dive site (altitude).
- On *Rescue Snorkel Diver* External Chest Compression (ECC) is not trained in practice.

# 6. Supervision:During the complete course, at least one authorised course director (as outlined above) must always be present.

- Classroom lectures may be delegated to a qualified assistant who performs the lesson under supervision by the course director.
- During practical under water training, a course director must be either in the water with the students, or in a cover boat, or on land as close as possible.
- Under no circumstances are students allowed to be unattended in the water without supervision. A qualified assistant may perform such supervisory tasks.

# 7. Emergencies: • Detailed emergency plan for the chosen site must be made and explained to all staff and participants.

• At least one trained staff member, familiar with the dive site, first aid and relevant equipment must remain on land or boat for co-ordination, supervision and emergencies.

# VII Students performance objectives

# **Rescue Diver**

By the end of the course the student should be able to:

- 1) Act as a rescue diver
- 2) Act as a stand by diver
- 3) Co-ordinate emergency situations
- 4) Be responsible for giving acute 1<sup>st</sup> aid

# Rescue Snorkel Diver

By the end of the course the student should be able to:

- 1) Act as a rescue snorkel diver
- 2) Act as a stand by snorkel diver
- 3) Co-ordinate smaller emergency situations
- 4) Be responsible for giving acute  $1^{st}$  aid

# VIII Minimum Course Duration

1)	Recommended number of sessions	10-20 depending on level
2)	Minimum duration:	4 days
	a) Classroom	2 days
	b) Open water	2 days
3)	Minimum number of dives:	4 dives

Note: Normally, no more than 2 dives should be made per day, with a surface interval of at least 2 hours.

# IX Quality Control / Assurance

CMAS strongly recommends and encourage all federations to use an adequate system for quality control and assurance. A system in widespread use and proven effectiveness is to send questionnaires to the students, followed by analysis of the feedback.

Questionable cases should be further investigated and measures be taken to avoid similar situations in the future.

# X Overview of Complete Training System

For a complete overview of the CMAS Training and Certificate System, please refer to the document "The new CMAS Training and Certificate System (a general introduction)".

# **Part II (Training Program)**

# I Course Schedule

### **Rescue Diver**

1)	Minimum duration	3-4 days
	a) Classroom	10 lectures and exercises
	b) Confined open water	4 dives
2)	Minimum number of dives	4 dives

- 2) Minimum number of dives
- 3) Lessons and topics (brief overview)
  - a) Theory
    - i) Introduction to the course
    - ii) The scope of incident and accident reporting and the trend in incidents and accidents.
    - iii) Emergency procedures at diver accidents.
    - iv) 1<sup>st</sup> aid related to diving accidents, including physiology and anatomy and basic diagnosis setting. The medical examination for divers.
    - v) Safety rules and CMAS's Code of Conduct.
    - vi) How to take bearings, navigation and seamanship.
    - vii) Search methods and methods for disengagement.
    - viii) Dive planning.
    - b) Practical
      - i) How to use 1<sup>st</sup> aid and resuscitation equipment, communication equipment, fixation- and transport equipment.
      - ii) Practical exercises in 1<sup>st</sup> aid including EAR, ECC, stabilising, positioning and transport of the victim.
      - iii) Wreck/cave dive, drift dive, night dive, and dive of local character i.e. ice dive including rescue operations.
- 4) Recommended schedule
  - a) Dry part
    - i) One whole day (12 hours)
    - ii) Mixture of theoretical lectures and practical exercises on the floor, using each other and dolls as victims.
  - b) Wet part
    - i) Two days.
    - ii) Mixture of theoretical lectures, planning and evaluation of dives, and practical exercises in confined open water.
  - c) Certification
- 5) Support material for students:
  - a) Used during classroom sessions:
  - b) Used for home study:
- 6) Support material for instructor:
  - a) Text as developed by his federation
  - b) Other recommended literature:
    - i) DAN handbooks
    - ii) Albert Pierce: Scuba Life Saving

# **Rescue Snorkel Diver**

- 1) Minimum duration
  - a) Classroom
  - b) Confined open water
- 2) Minimum number of dives
- 3) Lessons and topics (brief overview)
  - a) Theory
    - i) Introduction to the course
    - ii) The scope of incident and accident reporting and the trend in incidents and accidents.
    - iii) Emergency procedures at snorkel diver accidents.
    - iv) 1<sup>st</sup> aid related to snorkel diving accidents, including physiology and anatomy and basic diagnosis setting. The medical examination for divers.
    - v) Safety rules and CMAS's Code of Conduct.
    - vi) How to take bearings, navigation and seamanship.
    - vii) Search methods and methods for disengagement.
    - viii) Dive planning.
  - b) Practical
    - i) How to use 1<sup>st</sup> aid and resuscitation equipment, communication equipment, fixation- and transport equipment.
    - ii) Practical exercises in 1<sup>st</sup> aid including EAR, stabilising, positioning and transport of the victim.
    - iii) Shore dive, boat dive, drift dive and night dive including rescue operations.
- 4) Recommended schedule
  - a) Dry part
    - i) One whole day (12 hours)
    - ii) Mixture of theoretical lectures and practical exercises on the floor, using each other and dolls as victims.
  - b) Wet part
    - i) Two days.
    - ii) Mixture of theoretical lectures, planning and evaluation of dives, and practical exercises in confined open water.
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- 5) Support material for students:
  - a) Used during classroom sessions:
  - b) Used for home study:
- 6) Support material for instructor:
  - a) Text as developed by his federation
  - b) Other recommended literature:
    - i) DAN handbooks
    - ii) Albert Pierce: Scuba Life Saving

3-4 days10 lectures and exercises4 dives4 dives

# II Minimum Course Content (syllabus)

#### **Rescue Diver**

#### Theoretical Lessons

### Dry Part

- 1) TH1 (Classroom; approx. 01:00 hrs.)
  - a) Introduction, course administration
  - b) Topics:
    - Maintopic 1) Introduction, course administration
      - Subtopic 1) Registration of students
      - Subtopic 2) Welcome speech
      - Subtopic 3) Distribution of student materials
      - Subtopic 4) Presentation of course director and assistants
      - Subtopic 5) Presentation of the course schedule
      - Subtopic 6) Presentation of CMAS Rescue Speciality Courses
      - Subtopic 7) The aim of this course.
    - Maintopic 2) Training aids used: Overhead slides.
- 2) TH2 (classroom approx. 0:45 hrs.)
  - a) Why reporting incidents and accidents and trends in the reported incidents and accidents. Maintopic 1) Why reporting incidents and accidents?
    - Subtopic 1) Lay-out of the reporting form
    - Subtopic 2) Why does the form have this lay-out?
    - Subtopic 3) National and international accident statistics
    - Subtopic 4) Which kind of incidents and accidents must be reported?
    - Subtopic 5) Problems about registration and public access to the information.
    - Subtopic 6) Contact to the authorities.
    - Maintopic 2) Trends in the reported incidents and accidents.
      - Subtopic 1) National trends
      - Subtopic 2) International trends
      - Subtopic 3) What to learn from these observations.
- 3) TH3 (classroom approx. 0:45 hrs.)
  - a) Emergency procedures at diver accidents.
    - Maintopic 1) The accident happens
      - Subtopic 1) Where, When, How, How many, Why, Who?
      - Subtopic 2) The first impression of the situation
    - Maintopic 2) 1<sup>st</sup> action
      - Subtopic 1) Self rescue
      - Subtopic 2) Buddy rescue
      - Subtopic 3) Surface support
      - Subtopic 4) Other support

Maintopic 3) Recovery, towing and getting the victim out of the water

- Maintopic 4)  $1^{st}$  aid
- Maintopic 5) Control of the situation, keeping the overview
- Maintopic 6) Alarming
  - Subtopic 1) Theoretical
  - Subtopic 2) Method
  - Subtopic 3) Wording
  - Subtopic 4) Expected help from the rescue central
- Maintopic 7) Further treatment of the casualty
- Subtopic 1) What to do until the help arrives
- Maintopic 8) Support to assisting helpers
  - Subtopic 1) Taking the victim up and transport
  - Subtopic 2) Who and what shall follow the victim?
- Maintopic 9) Further treatment
  - Subtopic 1) Hospital
  - Subtopic 2) Pressure Chamber

Maintopic 10) Information to people near by, the authorities, family and diving federation.

- 4) TH4 (classroom approx. 0:45 hrs.)
  - a) Detailed reading of realistic emergency situation with SCUBA diver involved; based on a real case.
- 5) TH5 (classroom approx. 0:30 hrs.)
  - a) 1<sup>st</sup> aid in connection to diver accidents. It shall not be a 1<sup>st</sup> aid course like the ones run by Red Cross or similar organisations, but a very simple and effective course, which is easy to remember and use in practise.

Maintopic 1) Going through the most simple and most effective treatment at accidents involving divers.

Subtopic 1) Acute treatment shall be carried out using the available aids including 1<sup>st</sup> aid kit with oxygen.

Subtopic 2) Going through the practical aids and the optimal use of these.

Maintopic 2) Psychic 1<sup>st</sup> aid.

6) TH6 (Classroom approx. 0:15 hrs.)

a) Short reading on physiology and anatomy.

Maintopic 1) Reading of the topics within physiology and anatomy relevant to this course, with the main emphasis on the blood's circulation and the lung function.

- 7) TH7 (Classroom approx. 0:30 hrs.)
  - a) Making a diagnosis on an injured diver.
    - Maintopic 1) Diagnosing the most frequent diver injuries
      - Subtopic 1) Injuries due to difference in pressure.
      - Subtopic 2) Injuries due to partial pressure of the gases
      - Subtopic 3) Cooling.
      - Subtopic 4) Exhaustion.
      - Subtopic 5) Panic.
      - Subtopic 6) Drowning.
      - Subtopic 7) Chock.
      - Subtopic 8) Wet suit strangulation, dry suit squeeze.
      - Subtopic 9) Shallow water black out.
      - Subtopic 10) Unconsciousness.
      - Subtopic 11) Cardiac arrest.

- Subtopic 12) Burn.
- Subtopic 13) Bone and joint injuries.
- Subtopic 14) Bleedings.
- 8) TH8 (Classroom approx. 0:15 hrs.)
  - a) About the medical examination for divers.
    - Maintopic 1) Short going through the medical statement explaining why it is the way it is.
      - Subtopic 1) Explain why some diseases are contradictory to diving.
      - Subtopic 2) Explain the importance of using a doctor specialised in diving medicine for this examination.
- 9) TH9 (Classroom approx. 0:30 hrs)
  - a) Optional lecture on resent development in dive medicine by a dive medical.
  - b) Recompression chamber treatment.
- 10) TH10 (Classroom approx. 0:30 hrs.)
  - a) Reading of safety rules and CMAS Code of Conduct as a basis for planning the dives.
    - Maintopic 1) The meaning of safety rules.
    - Maintopic 2) Legal or intended as a guide?
    - Maintopic 3) Is it possible always to obey the rules?
- 11) TH11 (Classroom approx. 1:00 hrs.)
  - a) Working groups studying relevant cases followed by a discussion in plenary.

# Wet Part

- 1) TH1 (Classroom and outdoor, approx. 1:00 hrs.)
  - a) Theoretical reading of how to take bearings, navigation and seamanship.
    - Maintopic 1) Bearings are found in sea and land maps. Outdoor bearings are exercised.
      - Maintopic 2) Brief introduction to navigation.
      - Maintopic 3) The most important rules of the road at sea
      - Maintopic 4) Sound signals and ship's lights and daylight signals.
      - Maintopic 5) Knots and bends.
- 2) TH2 (Classroom, approx. 1:00 hrs.)
  - a) Planning of night dive
- 3) TH3 (Classroom, approx. 2:00 hrs.)
  - a) Theoretical reading of search methods and methods for disengagement.
    - Maintopic 1) Search methods useable for SCUBA divers.
    - Maintopic 2) Disengagement from panicked diver.
    - Maintopic 3) Disengagement from obstacles under sea.
- 4) TH4 (Classroom, approx. 1:00 hrs.)
  - a) Planning of wreck/cave dive from dive vessel.
- 5) TH5 (Classroom, approx. 1:00 hrs.)
  - a) Planning of drift dive from smaller boat.
- 6) TH6 (Classroom, approx. 2:00 hrs.)a) Evaluation of night-, boat- and drift dive.

- 7) TH7 (Classroom, approx. 1:00 hrs.)
  - a) Planning of final dive of local character i.e. ice dive.
- 8) TH8 (Classroom, approx. 1:00 hrs)a) Oral test.

**Practical Lessons** 

# Dry Part

- 1) PR1 (Classroom, approx. 0:30 hrs.)
  - a) Emergency communication equipment.
    - Maintopic 1) VHF.
    - Maintopic 2) Walky Talky.
    - Maintopic 3) Phone.
    - Maintopic 4) Maritime signalling equipment.
- 2) PR2 (Classroom, approx. 0:45 hrs.)
  - a) Emergency treatment equipment.
    - Maintopic 1) What to bring?
      - Maintopic 2) Where to place it?
      - Maintopic 3) How to use it.
      - Maintopic 4) How to maintain it.
      - Maintopic 5) Minimum equipment needed.
- 3) PR3 (Gymnasium or big hall, approx. 0:45 hrs.)
  - a) Underwater search equipment.
    - Maintopic 1) Demonstrate circle search on the floor.
    - Maintopic 2) Demonstrate sector search on the floor
    - Maintopic 3) Demonstrate towed free search on the floor
    - Maintopic 4) Demonstrate route search on the floor
- 4) PR4 (Classroom, approx. 0:45 hrs.)
  - a) Various practical initiatives using the 1<sup>st</sup> aid kit.
    - Maintopic 1) Stopping major bleedings.
    - Maintopic 2) Stasis.
    - Maintopic 3) Stabilising joints and bone injuries.
    - Maintopic 4) Sterile areas.
    - Maintopic 5) The use of anti shock blankets.
    - Maintopic 6) Cold injuries, hypothermia.
    - Maintopic 7) Burn, heat-stroke.
    - Maintopic 8) Torn of limbs.
    - Maintopic 9) Different kinds of shock.
    - Maintopic 10) Dehydration.
- 5) PR5 (Classroom, approx. 0:45 hrs.)

- a) 1<sup>st</sup> aid to unconscious person, resuscitation, stabilising. The practise is performed both with and without resuscitation equipment.
  - Maintopic 1) Recovery position.
  - Maintopic 2) Oxygen treatment.
  - Maintopic 3) EAR and ECC.
- 6) PR6 (Classroom, approx. 0:30 hrs.)
  - a) Lying, stabilising and transport.
    - Maintopic 1) Lying Subtopic 1) Go through the different possibility
      - Subtopic 1) Go through the different possibilities for patient lying.
      - Maintopic 2) Stabilising
        - Subtopic 1) How to stabilise the different injuries.
        - Subtopic 2) How to stabilise psychically
        - Subtopic 3) How to stabilise the patient as such.

Maintopic 3) Transport

- Subtopic 1) When to transport
- Subtopic 2) How to transport
- Subtopic 3) Practical hint on producing transport equipment by simple means.

# Wet Part

- 1) PR1 (Confined open water, approx. 2:00 hrs)
  - a) Night Dive from the beach.
  - b) Max 9 meters depth.
  - b) Pre-diving equipment and buddy checks.
  - c) Objectives:
    - Maintopic 1) Positioning by the means of bearings
    - Maintopic 2) Search procedures at night.
    - Maintopic 3) Emergency procedures at night
- 2) PR2 (Confined open water, approx. 2:30 hrs.)
  - a) Wreck/cave dive from dive vessel.
  - b) Depth max. 20 meters.
  - c) Objectives:
    - Maintopic 1) Special precautions regarding wreck/cave dives from dive vessels.
    - Maintopic 2) Bearings
    - Maintopic 3) Seamanship
    - Maintopic 4) Search
    - Maintopic 5) Disengagement methods
    - Maintopic 6) Taking up injured diver into the boat.
- 3) PR3 (Open water, approx. 2:30 hrs.)
  - a) Drift dive
  - b) Max depth 20 meters.

- d) Objectives:
  - Maintopic 1) Special precautions regarding drift dives.
  - Maintopic 2) Search in water with currents.
  - Maintopic 3) Towing and use of rescue line.
  - Maintopic 4) Taking the victim out of the water
  - Maintopic 5) Acute 1<sup>st</sup> aid and resuscitation.
- 4) PR4 (Outdoor on land, approx. 2:00 hrs.)
  - a) Transport and stabilising of casualty. Maintopic 1) Practical exercises of the transport methods learned.
- 5) PR5 (Open water, approx. 4:00 hrs.)
  - a) Rescue diving with planned incidents. The dive should be typical for the location, i.e. ice dive, river dive etc. The victim must be at least an experienced CMAS Two Star Diver.
  - b) Objectives:
    - Maintopic 1) The instructor and assistants are making as if incidents and the students are using the rescue techniques learned. Some act as rescue divers, others as dive supervisors.
    - Maintopic 2) At this last dive the rescue procedure is carried out including all aspects: search, recovery, resuscitation at the surface, towing, uptake in boat, etc.

# End of course

- 1) Evaluation
- 2) Administrative work
- 3) Distribution of recognition material in appropriate manner
- 4) Social gathering, promotion of other speciality courses

### **Rescue Snorkel Diver**

#### Theoretical Lessons

### Dry Part

- 1) TH1 (Classroom; approx. 01:00 hrs.)
  - a) Introduction, course administration
  - b) Topics:
    - Maintopic 1) Introduction, course administration
      - Subtopic 1) Registration of students
      - Subtopic 2) Welcome speech
      - Subtopic 3) Distribution of student materials
      - Subtopic 4) Presentation of course director and assistants
      - Subtopic 5) Presentation of the course schedule
      - Subtopic 6) Presentation of CMAS Rescue Speciality Courses
      - Subtopic 7) The aim of this course.

Maintopic 2) Training aids used: Overhead slides.

- 2) TH2 (classroom approx. 0:45 hrs.)
  - a) Why reporting incidents and accidents and trends in the reported incidents and accidents. Maintopic 1) Why reporting incidents and accidents?
    - Subtopic 1) Lay-out of the reporting form
    - Subtopic 2) Why does the form have this lay-out?
    - Subtopic 3) International accident statistics
    - Subtopic 4) Which kind of incidents and accidents must be reported?
    - Subtopic 5) Problems about registration and public access to the information.
    - Subtopic 6) Contact to the authorities.
    - Maintopic 2) Trends in the reported incidents and accidents.
      - Subtopic 1) National trends
      - Subtopic 2) International trends
      - Subtopic 3) What to learn from these observations.
- 3) TH3 (classroom approx. 0:45 hrs.)
  - a) Emergency procedures at snorkel diver accidents.
    - Maintopic 1) The accident happens
      - Subtopic 1) Where, When, How, How many, Why, Who?
      - Subtopic 2) The first impression of the situation

Maintopic 2) 1<sup>st</sup> action

- Subtopic 1) Self rescue
- Subtopic 2) Buddy rescue
- Subtopic 3) Surface support
- Subtopic 4) Other support
- Maintopic 3) Recovery, towing and getting the victim out of the water
- Maintopic 4) 1<sup>st</sup> aid
- Maintopic 5) Control of the situation, keeping the overview

Maintopic 6) Alarming

- Subtopic 1) Theoretical
- Subtopic 2) Method
- Subtopic 3) Wording
- Subtopic 4) Expected help from the rescue central

Maintopic 7) Further treatment of the casualty

Subtopic 1) What to do until the help arrives

- Maintopic 8) Support to assisting helpers
  - Subtopic 1) Taking the victim up and transport
  - Subtopic 2) Who and what shall follow the victim?
- Maintopic 9) Further treatment
  - Subtopic 1) Hospital

Maintopic 10) Information to people near by, the authorities, family and diving federation.

- 4) TH4 (classroom approx. 0:45 hrs.)
  - a) Detailed reading of realistic emergency situation with snorkel diver involved; based on a real case.
- 5) TH5 (classroom approx. 0:30 hrs.)
  - a) 1<sup>st</sup> aid in connection to snorkel diver accidents. It shall not be a 1<sup>st</sup> aid course like the ones run by Red Cross or similar organisations, but a very simple and effective course, which is easy to remember and use in practise.
    - Maintopic 1) Going through the most simple and most effective treatment at accidents involving snorkel divers.
      - Subtopic 1) Acute treatment shall be carried out using the available aids including 1<sup>st</sup> aid kit with oxygen.
      - Subtopic 2) Going through the practical aids and the optimal use of these.

Maintopic 2) Psychic 1<sup>st</sup> aid.

- 6) TH6 (Classroom approx. 0:15 hrs.)
  - a) Short reading on physiology and anatomy.
     Maintopic 1) Reading of the topics within physiology and anatomy relevant to this course, with the main emphasis on the blood's circulation and the lung function.
- 7) TH7 (Classroom approx. 0:30 hrs.)
  - a) Making a diagnosis on an injured snorkel diver.

Maintopic 1) Diagnosing the most frequent snorkel diver injuries

- Subtopic 1) Injuries due to difference in pressure.
- Subtopic 2) Oxygen depletion.
- Subtopic 3) Cooling.
- Subtopic 4) Exhaustion.
- Subtopic 5) Panic.
- Subtopic 6) Drowning.
- Subtopic 7) Chock.
- Subtopic 8) Wet suit strangulation.
- Subtopic 9) Shallow water black out.
- Subtopic 10) Unconsciousness.
- Subtopic 11) Cardiac arrest.
- Subtopic 12) Burn.
- Subtopic 13) Bone and joint injuries.
- Subtopic 14) Bleedings.

- 8) TH8 (Classroom approx. 0:15 hrs.)
  - a) About the medical examination for divers.
    - Maintopic 1) Short going through the medical statement explaining why it is the way it is.Subtopic 1) Explain why some diseases are contradictory to diving.
      - Subtopic 2) Explain the importance of using a doctor specialised in diving medicine for this examination.
- 9) TH9 (Classroom approx. 0:30 hrs)
- a) Optional lecture on resent development in dive medicine by a dive medical.
- 10) TH10 (Classroom approx. 0:30 hrs.)
  - a) Reading of safety rules and CMAS Code of Conduct as a basis for planning the dives.
    - Maintopic 1) The meaning of safety rules.
    - Maintopic 2) Legal or intended as a guide?
    - Maintopic 3) Is it possible always to obey the rules?
- 11) TH11 (Classroom approx. 1:00 hrs.)
  - a) Working groups on relevant cases followed by discussion in plenary.

# Wet Part

- 1) TH1 (Classroom and outdoor, approx. 1:00 hrs.)
  - a) Theoretical reading of how to take bearings, navigation and seamanship.
    - Maintopic 1) Bearings are found in sea and land maps. Outdoor bearings are exercised.
    - Maintopic 2) Brief introduction to navigation.
    - Maintopic 3) The most important rules of the road at sea
    - Maintopic 4) Sound signals and ship's lights and daylight signals.
    - Maintopic 5) Knots and bends.
- 2) TH2 (Classroom, approx. 1:00 hrs.) a) Planning of night dive
  - a) Planning of night dive
- 3) TH3 (Classroom, approx. 2:00 hrs.)
  - a) Theoretical reading of search methods and methods for disengagement.
    - Maintopic 1) Search methods useable for snorkel divers.
    - Maintopic 2) Disengagement from panicked diver.
    - Maintopic 3) Disengagement from obstacles under sea.
- 4) TH4 (Classroom, approx. 1:00 hrs.)
  - a) Planning of snorkel dive from smaller boat.
- 5) TH5 (Classroom, approx. 1:00 hrs.)a) Planning of drift dive.
- 6) TH6 (Classroom, approx. 2:00 hrs.)a) Evaluation of dives 1-3: night-, boat- and drift dive.
- 7) TH7 (Classroom, approx. 1:00 hrs.)

- a) Planning of final dive. The dive should be characteristic for the area, i.e. ice dive. In this dive all aspects of the rescue procedure have to be included.
- 8) TH8 (Classroom, approx. 1:00 hrs)
  - a) Oral test.

### **Practical Lessons**

# Dry Part

- 1) PR1 (Classroom, approx. 0:30 hrs.)
  - a) Emergency communication equipment.
    - Maintopic 1) VHF.
    - Maintopic 2) Walky Talky.
    - Maintopic 3) Phone.
    - Maintopic 4) Maritime signalling equipment.
- 2) PR2 (Classroom, approx. 0:45 hrs.)
  - a) Emergency treatment equipment.
    - Maintopic 1) What to bring?
      - Maintopic 2) Where to place it?
      - Maintopic 3) How to use it.
    - Maintopic 4) How to maintain it.
    - Maintopic 5) Minimum equipment needed.
- 3) PR3 (Classroom, approx. 0:45 hrs.)
  - a) Various practical initiatives using the 1<sup>st</sup> aid kit.
    - Maintopic 1) Stopping major bleedings.
    - Maintopic 2) Stasis.
    - Maintopic 3) Stabilising joints and bone injuries.
    - Maintopic 4) Sterile areas.
    - Maintopic 5) The use of anti shock blankets.
    - Maintopic 6) Cold injuries, hypothermia.
    - Maintopic 7) Burn, heat-stroke.
    - Maintopic 8) Torn of limbs.
    - Maintopic 9) Different kinds of shock.
    - Maintopic 10) Dehydration.
- 4) PR4 (Classroom, approx. 0:45 hrs.)
  - a) 1<sup>st</sup> aid to unconscious person, resuscitation, stabilising. The practise is performed both with and without resuscitation equipment.
    - Maintopic 1) Recovery position.
    - Maintopic 2) Oxygen treatment.
    - Maintopic 3) Elementary EAR exclusive ECC.
    - Maintopic 4) Information about ECC.
- 5) PR5 (Classroom, approx. 0:30 hrs.)

- a) Lying, stabilising and transport.
  - Maintopic 1) Lying

Subtopic 1) Go through the different possibilities for patient lying.

- Maintopic 2) Stabilising
  - Subtopic 1) How to stabilise the different injuries.
  - Subtopic 2) How to stabilise psychically
  - Subtopic 3) How to stabilise the patient as such.

Maintopic 3) Transport

- Subtopic 1) When to transport
- Subtopic 2) How to transport
- Subtopic 3) Practical hint on producing transport equipment by simple means.

# Wet Part

- 1) PR1 (Confined open water, approx. 2:00 hrs)
  - a) Night Dive from the beach.
  - b) Max 5 meters depth.
  - b) Pre-diving equipment and buddy checks.
  - c) Objectives:
    - Maintopic 1) Positioning by the means of bearings
    - Maintopic 2) Search procedures at night.
    - Maintopic 3) Emergency procedures at night
- 2) PR2 (Confined open water, approx. 2:30 hrs.)
  - a) Snorkel dive from smaller boat.
  - b) Depth max. 5 meters.
  - c) Objectives:
    - Maintopic 1) Special precautions regarding boat dives from small boats.
    - Maintopic 2) Bearings
    - Maintopic 3) Seamanship
    - Maintopic 4) Search
    - Maintopic 5) Disengagement methods
    - Maintopic 6) Taking up injured diver into the boat.
- 3) PR3 (Open water, approx. 2:30 hrs.)
  - a) Drift dive
  - b) Max depth 5 meters.
  - c) Objectives:
    - Maintopic 1) Special precautions regarding drift dives.
    - Maintopic 2) Search in water with currents.
    - Maintopic 3) Towing and use of rescue line
    - Maintopic 4) Taking the victim out of the water
    - Maintopic 5) Acute 1<sup>st</sup> aid and resuscitation.
- 4) PR4 (Outdoor on land, approx. 2:00 hrs.)

- a) Transport and stabilising of casualty. Maintopic 3) Practical exercises of the transport methods learned.
- 5) PR5 (Open water, approx. 4:00 hrs.)
  - a) Rescue diving with planned incidents. The dive shall be relevant for the locality, i.e. ice dive. The victim must be at least an experienced CMAS Two star Snorkel Diver.
  - c) Objectives: Maintopic 1) The instructor and assistants are making as if incidents and the students are using the rescue techniques learned. Some act as rescue divers, others as dive supervisors.
    - Maintopic 2) This last dive shall include all aspects of a rescue operation.

# End of course

- 1) Evaluation
- 2) Administrative work
- 3) Distribution of recognition material in appropriate manner
- 4) Social gathering, promotion of other speciality courses

# III Knowledge review and Skills Assessment

#### Theoretical knowledge:

An assessment may be made in written or in oral form, but it is not mandatory. If made in written form a multiple choice quiz should be used.

#### **Practical skills:**

- 1) At the start of the course: if there is any reasonably doubt about the student's entry-skill, a check-out dive may be demanded prior to the course.
- 2) During course: No formal test is required; see below.
- 3) End of course: No formal test is required; see below.

The second and third dive may be used to observe and eventually assess the behaviour and the competence of the student without telling this to him. In case of unsatisfactory performance, the student should be invited to follow the next speciality course of this kind to improve his skills in the mentioned area, or an extra training dive may be offered.

# IV Issuing of Recognition Material

Only students who have attended the whole course and successfully passed any required assessment or evaluation may receive the corresponding recognition material:

- Overlay card
- Badge
- Wall certificate